United States
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Office of Ground Water
and Drinking Water

Safe Drinking Water Information System/Federal (SDWIS/FED) Data Entry Instructions

Contract No. 68-W-99-002
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Prepared for:

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SAFE DRINKING WATER INFORMATION SYSTEM/FEDERAL (SDWIS/FED)
Data Entry Instructions

Release Log

Note: All change notices/descriptions relating to the SDWIS/FED Data Entry Instructions should be filed immediately following the Release Log.

Release Number	Effective Date	Description of Release
1.00	10/01/89	Initial Release of Production Documentation
2.00	12/31/92	Revised Release of Production Documentation
2.10	4/01/93	Insert and Replacement Pages for Release 2.00
2.11	7/01/93	Replacement Pages for Release 2.10
2.12	3/01/94	Replacement Pages for Release 2.11
SDWIS/FED 2.1	11/15/97	Replacement Pages for SDWIS/FED Release 2.1
SDWIS/FED 2.3	1998/06/30	Revised Release of Production Documentation
SDWIS/FED 2.4	1998/08/15	Replacement Pages for Release 2.4
SDWIS/FED 2.5	1998/11/15	Revised Release of Production Documentation
SDWIS/FED 2.6	1999/02/15	Replacement Pages for Release 2.6
SDWIS/FED 2.7	1999/05/15	Replacement Pages for Release 2.7
SDWIS/FED 2.75	1999/06/15	Revised Release of Production Documentation
SDWIS/FED 2.8	1999/08/22	Replacement Pages for Release 2.8
SDWIS/FED 2.9	1999/11/15	Revised Release of Production Documentation
SDWIS/FED 3.1	2000/01/15	Revised Release of Production Documentation
SDWIS/FED 3.2	2000/04/21	Revised Release of Production Documentation
SDWIS/FED 3.3	2000/08/14	Revised Release of Production Documentation
SDWIS/FED 3.5	2001/01/19	Replacement Pages for Release 3.5
SDWIS/FED 3.6	2001/04/23	Replacement Pages for Release 3.6

SAFE DRINKING WATER INFORMATION SYSTEM/FEDERAL (SDWIS/FED)
Data Entry Instructions

Release Log (Continued)

Release Number	Effective Date	Description of Release
SDWIS/FED 3.7	2001/07/23	Replacement Pages for Release 3.7
SDWIS/FED 3.8	2001/10/22	Revised Release of Production Documentation

CONTENTS

EXHIBITS

INTRODUCTION

The Safe Drinking Water Information System/Federal (SDWIS/FED) is designed to support the United States Environmental Protection Agency (EPA) Office of Ground Water and Drinking Water (OGWDW) in monitoring compliance with the Safe Drinking Water Act of 1974.

This document, the *Safe Drinking Water Information System/Federal (SDWIS/FED) Data Entry Instructions*, is a part of the documentation designed to assist SDWIS/FED system users. It provides general and detailed information for entering data into the SDWIS/FED data base. Other documentation includes the *SDWIS/FED On-Line Data Dictionary* and the *Safe Drinking Water Information System/Federal (SDWIS/FED) System User's Guide.*

The *SDWIS/FED On-Line Data Dictionary* contains comprehensive information about, and related to, each attribute maintained in the SDWIS/FED data base.

The *SDWIS/FED System User's Guide* provides EPA Headquarters, Regional, and State personnel with a convenient, easy to use facility for searching through the files of SDWIS/FED and retrieving the information available for each Public Water System (PWS).

The SDWIS/FED user community will receive additions and revisions to these documents as they become available.

The Data Capture Forms have been designed to assist SDWIS/FED system users in data collection efforts. These forms are intended for data collection only and not for direct input to the SDWIS/FED system, which will be accomplished via the SDWIS/FED Data Transfer File (DTF).

These data entry instructions are intended to be as comprehensive as possible. However, there are certain related issues that are primarily programmatic in nature and, in general, are not discussed here.

This document is arranged in two major parts. The first part (consisting of CHAPTERS I through VI) contains general information pertaining to all Data Capture Forms and to the SDWIS/FED system as a whole. The second part (CHAPTER VII) contains all of the detailed information pertinent to each individual Data Capture Form and/or Record Deletion Form.

CHAPTER I FORMS DESCRIPTION

There are 16 different Data Capture Forms and a Record Deletion Form. The following is an overview of these forms, their sections, and the information contained therein. The Record Deletion Form is discussed in CHAPTER VII, "Detailed Coding Instructions."

! FORM A

Section A1 SYSTEM ADDRESS

This section is used to enter facility name and address information for a public water system (PWS). Where multiple facilities exist for a public water system at different locations, this section should be used to enter address information for the system as a whole. The following data is entered via this section:

DATA ELEMENT	FORM REFERENCE NAME
C131	SYSTEM NAME
C132	RESPONSIBLE PARTY
C133	ADDRESS LINE 1
C135	ADDRESS LINE 2
C137	CITY
C139	STATE
C141	ZIP CODE + 4
C143	TELEPHONE (AREA CODE AND NUMBER)

Section A2 PUBLIC WATER SYSTEM CHARACTERISTICS

This section is used to enter data related to the various physical characteristics of the PWS. The following is entered via this section:

DATA ELEMENT	FORM REFERENCE NAME
C101	PWS ID
C105	PWS TYPE
C107	ACTIVITY FLAG
C113	DEACTIVATION DATE (YEAR AND MONTH)
C117	RETAIL POPULATION SERVED
C121	PERCENT SURFACE
C123	PERCENT GROUND
C125	PERCENT PURCHASED SURFACE

C127	PERCENT PURCHASED GROUND
C147	RETAIL SERVICE CONNECTIONS
C149	AVG DAILY PROD
C151	DESIGN CAPACITY
C153	EMERGENCY PROD
C155	STORAGE CAPACITY
C159	NON-COMMUNITY SEASON BEGIN (MONTH AND DAY)
C161	NON-COMMUNITY SEASON END (MONTH AND DAY)
C163	OWNER TYPE

Section A3 OTHER ADDRESS(ES)

This section is used to enter additional address information, such as an owner address or related facility addresses. The following is entered via this section:

DATA ELEMENT	**FORM REFERENCE NAME**
C301	ID
C303	TYPE
C305	ADDRESSEE NAME
C307	ADDRESS LINE 1
C309	ADDRESS LINE 2
C311	CITY
C313	STATE
C314	COUNTRY CODE
C315	ZIP CODE + 4
C316	INTERNATIONAL POSTAL CODE

! FORM B

Section B1 SOURCE/ENTITY DATA

This section is used to enter data characterizing a source of water utilized by, or an entity related to, a PWS. An entity can be any location or facility related to the PWS. Such entities may include distribution system entry points, treatment facilities, pumping facilities, and water storage facilities. In order for the SDWIS/FED system to permit the addition of a new PWS, at least one source entity data record must be specified with C405 indicating a source of water. The following is entered via this section:

DATA ELEMENT	FORM REFERENCE NAME
C401	SE ID
C403	NAME
C405	SE RECORD TYPE
C407	SE CODE
C409	AVAILABILITY
C411	SELLER PWS ID (STATE AND ID NUMBER)
C418	MERIDIAN NAME
C419	TOWNSHIP N/S
C421	RANGE E/W
C423	SEC
C425	1/4 SEC
C426	1/4 1/4 SEC
C427	RIVER REACH (HYDROLOGIC UNIT CODE AND SEG NUM)
C429	ON REACH
C431	REACH MILES
C433	SOURCE TREATMENT CODE
C435	SELLER SOURCE TREATMENT CODE

Section B1 (2) LOCATIONAL DATA

This section is used to enter data identifying the geographic location of a PWS or facility. A complete Source/Entity record must include both Latitude and Longitude in either Degrees, Minutes, and Seconds or in Decimal Degrees.

Notes:

- When the user inserts or modifies Latitude for American Samoa (AS), the equatorial sign will be set to "-" regardless of whether the user entered a "+" or a "-" in the equatorial sign field. There is no error message telling the user that "+" is incorrect and the value was changed by the system to "-."

- When the user inserts or modifies Latitude for U.S. Minor Outlying Islands (UM), the user must set the equatorial sign to "-" or "+." When the user inserts or modifies Longitude for U.S. Minor Outlying Islands (UM), the user must set the Meridian sign to "-" or "+."

- When the user inserts or modifies Longitude for Alaska (AK), the user must set the Meridian sign to "-" or "+" in order to accommodate the western Aleutian Islands.

The following is entered via this section:

DATA ELEMENT	FORM REFERENCE NAME
C401	SE ID
C415	LATITUDE ±(DEGS:MINS:SECS)
C417	LONGITUDE ±(DEGS:MIN:SECS)
OR	
C441	LATITUDE ±(DECIMAL DEGREES)
C443	LONGITUDE ±(DECIMAL DEGREES)

Note: If C415 and C417 are used, C441 and C443 must not be used. Conversely, if C441 and C443 are used, C415 and C417 must not be used.

Mandatory Method Accuracy Description (MAD) Fields

C445	LATITUDE/LONGITUDE METHOD OF COLLECTION
C447	LATITUDE/LONGITUDE ACCURACY
C449	LATITUDE/LONGITUDE DESCRIPTION CATEGORY
C451	LATITUDE/LONGITUDE HORIZONTAL DATUM
C453	LATITUDE/LONGITUDE SOURCE SCALE
C455	LATITUDE/LONGITUDE POINT-LINE-AREA

Note: Mandatory MAD Codes are required to be reported according to the implementation schedule below. Prior to that time, the mandatory fields are optional, but if any of the required fields are reported, they all must be reported. If not, all the required MAD Codes and the latitude

and longitude will be rejected. Required MAD Codes must be reported with latitude and longitude no later than January 1, 2000 for Community Water Systems and no later than January 1, 2005 for Non-Transient Non-Community Water Systems. For Transient Non-Community Water Systems (and for other systems prior to these dates), the mandatory MAD Codes are a data sharing goal.

Optional MAD Fields

C457	LATITUDE/LONGITUDE DATE OF COLLECTION
C459	LATITUDE/LONGITUDE SOURCE
C463	LATITUDE/LONGITUDE VERIFICATION

Vertical Measurement

C465	VERTICAL MEASURE
C467	VERTICAL MEASURE METHOD OF COLLECTION
C469	VERTICAL MEASURE ACCURACY
C471	VERTICAL DATUM

Comments

C461	LOCATION DESCRIPTION COMMENTS

Section B2 TREATMENT DATA

This section is used to enter data identifying treatments applied to a unique source of water or treatment plant used by a PWS. A complete treatment record must include both the TREATMENT OBJECTIVE and the TREATMENT PROCESS. The following is entered via this section:

DATA ELEMENT	**FORM REFERENCE NAME**
C401	SE ID
C481	TREATMENT ID
C483	TREATMENT OBJECTIVE
C485	TREATMENT PROCESS
C487	INNOVATIVE TREATMENT INDICATOR
C489	INNOVATIVE TREATMENT COMMENT

Note: When specifying an Innovative Treatment Objective/Process, C487 (Innovative Treatment Indicator) must be specified with a value of "Y."

Section B3 FACILITY FLOW DATA

This section is used to enter data linking two Water System Facilities. Using this section, the flow of water from one facility to the next can be mapped. The following is entered via this section:

DATA ELEMENT	FORM REFERENCE NAME
C401	SE ID
A5000	SE ID 2

Section B4 TREATMENT PLANT ADDRESS DATA

This section is used to enter data characterizing the full physical address of a treatment plant.

EPA guidance states that if the Latitude and Longitude of all treatment plant facilities are not reported to SDWIS/FED, then the full physical address of any treatment addresses represent the minimum needed to meet the Core Data Set requirements. The core data elements for the treatment plant address are not registration requirements so SDWIS/FED software will still accept a treatment plant if any of the core data elements are missing in the DTF, regardless of whether the Latitude and Longitude for the treatment plant are reported. The core data elements for a treatment plant address must be reported, however, before the treatment plant address is posted to the data base. States will be evaluated on the percentage of treatment plant addresses reported when no Latitude and Longitude exists to determine their eligibility for grant money.

The following is entered via this section:

DATA ELEMENT	FORM REFERENCE NAME
C355	TREATMENT PLANT NAME
C356	ADDRESS LINE 1
C357	ADDRESS LINE 2
C358	CITY
C359	STATE
C360	ZIPCODE+4

! FORM C

Section C1 GEOGRAPHIC AREAS SERVED

This section is used to enter data identifying geographic areas or jurisdictions served by a PWS. All data elements within a single geographic areas served record should be valued with data describing a single geographic area. For example, if city "X" is in county "A," they both should be included in the same geographic areas served record. Conversely, if city "X" is outside of county "A," they each should be included in separate records. The SDWIS/FED data base has one geographic areas served record for each geographic area served reported to EPA. The following is entered via this section:

DATA ELEMENT	FORM REFERENCE NAME
C501	GA ID
C503	ADMIN REGION
C505	ADMIN DISTRICT
C507	FEDERAL CONGRESS DISTRICT
C508	STATE COUNTY
C509	FIPS COUNTY
C513	CITY
C515	INDIAN RESERVATION

Section C2 SERVICE AREAS

This section is used to enter data characterizing the type of area served by a PWS. The SDWIS/FED data base has one service area record for each type of area served reported to EPA and must have one service area designated as primary for non-community and non-transient, non-community public water systems. The following is entered via this section:

DATA ELEMENT	FORM REFERENCE NAME
C601	SERV ID
C603	TYPE/CAT
C605	PRIMARY SERVICE FLAG

Section C3 ON-SITE VISITS

This section is used to enter data related to on-site visits made to a public water system. The SDWIS/FED data base has one on-site visit record for each on-site visit (such as a sanitary survey), reported to EPA. The following is entered via this section:

DATA ELEMENT	FORM REFERENCE NAME
C701	VISIT ID
C703	VISIT DATE (YEAR, MONTH, AND DAY)
C705	VISIT REASON

! FORM C4

Section C4 MILESTONE EVENTS DATA

This section is used to enter data pertaining to milestones. The SDWIS/FED data base has one milestone record for each milestone reported to EPA. Table TFRMEVNT of the *SDWIS/FED On-Line Data Dictionary* provides the codes needed to enter milestone data in the SDWIS/FED data base. The following is entered via this section:

DATA ELEMENT	FORM REFERENCE NAME
C801	MILESTONE ID
C803	MILESTONE DATE (YEAR, MONTH, AND DAY)
C804	MILESTONE END DATE (YEAR, MONTH, AND DAY)
C805	MILESTONE CODE
C813	MILESTONE COMMENT
C815	MILESTONE VALUE
C817	REASON CODE

! FORM D

Section D1 VIOLATION DATA

This section is used to enter data characterizing a violation of a primary drinking water regulation issued to a public water system by a State or Federal agency. The SDWIS/FED data base has one violation record for each violation reported to EPA. The following is entered via this section:

DATA ELEMENT	FORM REFERENCE NAME
C1101	VIOLATION ID (FY AND ID NUMBER)
C1103	CONTAMINANT
C1105	VIOLATION TYPE
C1107	COMPLIANCE PERIOD BEGIN DATE (YEAR, MONTH, AND DAY)
C1109	COMPLIANCE PERIOD END DATE (YEAR, MONTH, AND DAY)
C1111	COMPLIANCE PERIOD DURATION
C1115	AWARENESS DATE (YEAR, MONTH, AND DAY)
C1123	ANALYSIS RESULT
C1125	MCL VIOLATED
C1127	NUM SAMPLES REQUIRED
C1129	NUM SAMPLES TAKEN
C1131	MAJOR VIOLATION
C1143	SE ID
C1144	PUBLIC NOTICE UNDERLYING VIOLATION
C1145	PUBLIC NOTICE UNDERLYING CRITERIA

! FORM E

Section E1 ENFORCEMENT DATA

This section is used to enter data characterizing an enforcement action taken against a public water system by a State or Federal agency and allows the connection of the action to one or more violations to which it applies. The SDWIS/FED data base has one enforcement record for each enforcement action reported to EPA, and one or more links to the violations to which the action applies. The following is entered via this section:

DATA ELEMENT	FORM REFERENCE NAME
C1201	ENFORCEMENT ID (FY AND ID NUMBER)
C1203	ENFORCEMENT DATE (YEAR, MONTH, AND DAY)
C1205	FOLLOW-UP ACTION
C1215	ENFORCEMENT COMMENT
X5000	ASSOCIATED VIOLATION RANGE BEGIN (YEAR, MONTH, AND DAY) END (YEAR, MONTH, AND DAY)
	OR
Y5000	ASSOCIATED VIOLATION IDS VIOLATION ID 1 (FY AND ID NUMBER) VIOLATION ID 2 (FY AND ID NUMBER) VIOLATION ID 3 (FY AND ID NUMBER) VIOLATION ID 4 (FY AND ID NUMBER)
	OR
Z5000	ASSOCIATED VIOLATION CONTAMINANT GROUPS CONTAMINANT GROUP # 1 (TYPE CONTAMINANT COMPLIANCE PERIOD BEGIN DATE (YEAR, MONTH, AND DAY)) CONTAMINANT GROUP # 2 (TYPE CONTAMINANT COMPLIANCE PERIOD BEGIN DATE (YEAR, MONTH, AND DAY))

Note: A third contaminant group on a single DTF line may be included when a 2-digit year is used in the Z5000 Compliance Period Begin Dates.

OR

J5000 ASSOCIATED J5000 GROUP
(ENFORCEMENT ACTION BEGIN DATE (YEAR, MONTH, AND DAY)
ENFORCEMENT COMPLIANCE DATE (YEAR, MONTH, AND DAY)
VIOLATION TYPE CODE
CONTAMINANT CODE
RULE CODE)

! FORM F

Section F1 VARIANCES, EXEMPTIONS AND OTHER RELATED DATA

This section is used to enter data characterizing a variance, exemption, or other related data associated with a public water system.

In addition to variances and exemptions, which populate the Deviation table (TFRDEVIA) in SDWIS/FED, F1 DTF transactions for turbidity waivers and the reasons filtration is required under the Surface Water Treatment Rule (SWTR) populate the SDWIS/FED Milestone table (TFRMEVNT).

Record Type MIF has been added to table TFRMEVNT of the *SDWIS/FED On-Line Data Dictionary* for this purpose. Reason Codes also appear in table TFRMEVNT.

The SDWIS/FED data base has one variance, exemption or other related data record for each of these actions reported to EPA. The following is entered via this section:

DATA ELEMENT	FORM REFERENCE NAME
C3001	VE ID (FY AND ID NUMBER)
C3003	CONTAMINANT
C3005	RECORD TYPE
C3007	EFFECTIVE DATE (YEAR, MONTH, AND DAY)
C3009	EXPIRATION DATE (YEAR, MONTH, AND DAY)
C3011	STATUS CODE
C3013	MODIFIED MCL
C3015	TREATMENT PROCESS
C3017	ALTERNATE PROCESS
C3019	REASON
C3027	VULNERABILITY FLAG
C3029	ALTERNATE MONITORING FREQUENCY
C3031	VE SE ID

Section F2 VE SCHEDULE

This section is used to enter data characterizing a schedule of events and/or actions related to a variance, exemption, or other related data associated with a public water system. The SDWIS/FED data base has one schedule record for each event or action related to a variance or exemption reported to EPA. The following is entered via this form:

DATA ELEMENT	FORM REFERENCE NAME
C3001	VE ID (FY AND ID NUMBER)
C3101	SCHEDULE ID
C3103	ACTION
C3105	SCHEDULED DATE (YEAR, MONTH, AND DAY)
C3107	ACCOMPLISHED DATE (YEAR, MONTH, AND DAY)

! FORM H1

Section H1 SAMPLE DATA

This section is used to enter Lead 90th Percentile (Pb90) and Unregulated Contaminant Monitoring (UCM) data. It is important to note that Sample data must be submitted as a separate file, and can be run only as a Traditional Update.

Pb90 data must be reported to SDWIS/FED for all large and medium (i.e., >3,300 population served) systems. For small systems, the Pb90 levels must begin to be reported via FORM H1 with the first lead action level exceedence, and forever, thereafter (whether any further exceedences occur or not). The SDWIS/FED data base contains one sample data record for each Pb90 record reported to EPA.

Additionally, all community water systems or non-transient, non-community water systems are required to monitor for unregulated contaminants.

The following is entered via this section:

DATA ELEMENT	FORM REFERENCE NAME	USAGE*
C2101	SAMPLE ID	BOTH
C2103	SAMPLE BEGIN DATE (YEAR, MONTH, AND DAY)	Pb90
C2105	SAMPLE END DATE (YEAR, MONTH, AND DAY)	BOTH
C2107	SAMPLE CONTAMINANT	BOTH
C2109	SAMPLE RESULT SIGN	UCM
C2111	SAMPLE ANALYSIS RESULT	BOTH
C2112	UNIT OF MEASURE	UCM
C2113	SAMPLE ANALYSIS METHOD	UCM
C2115	SOURCE TYPE	UCM
C2119	SE ID	UCM
C2125	QTY COMPOSITED	UCM
C2137	SAMPLE TYPE	UCM
C2139	SAMPLING RECONCILIATION ID	BOTH

* Four data elements apply to BOTH Pb90 and UCM; one applies only to Pb90; and seven apply only to UCM.

CHAPTER II DATA FORMATTING REQUIREMENTS

There are several formatting requirements to which the user must adhere to successfully submit data to SDWIS/FED. They are as follows:

DATA TRANSFER FILE (DTF)

The Data Transfer File is the only format by which data can be entered into the SDWIS/FED data base.

Each Data Transfer File record is 80 characters in length and has the following format:

Definition	**Positions**	**Example**
Form ID	1 - 2	A1
Qualifier 1	3 - 11	PWS-ID
Qualifier 2	12 - 18	SE-ID
Qualifier 3	19 - 25	TREAT-ID
Action Code	26	D, I, or M*
Data Element Number	27 - 31	Cnnnn
Data Value	32 - 71	
Reserved for SDWIS/FED	72 - 74	
Batch Sequence Number	75 - 80	MMDDYY

* D = DELETE, I = INSERT, and M = MODIFY

FORM ID	DATA ADDRESS QUALIFIERS QUAL 1 QUAL 2 QUAL 3	ACT. CODE	DATA ELEM. NUM.	DATA VALUE	N/A	Batch Sequence Number
1-2	3-11 12-18 19-25	26	27-31	32-71	72-74	75-80

Secondary Address Qualifiers

In those cases where multiple records can be input to SDWIS/FED, secondary data address qualifiers are required for each record. They are needed to uniquely identify the specific record being processed. These secondary data address qualifiers are shown in the "Qualifier 2" and the "Qualifier 3" columns in the list below.

SECTION ID	SECTION NAME	DATA ADDRESS QUALIFIERS PRIMARY QUALIFIER 1	SECONDARY QUALIFIER 2	QUALIFIER 3
A1	SYSTEM ADDRESS	*PWS-ID	N/A	N/A
A2	PWS CHARACTERISTICS	*PWS-ID	N/A	N/A
A3	OTHER ADDRESSES	*PWS-ID	*ADDRESS-ID	N/A
B1	SOURCE/ENTITY DATA	*PWS-ID	*SE-ID	N/A
B1(2)	LOCATION DATA	*PWS-ID	*SE-ID	N/A
B2	TREATMENT DATA	*PWS-ID	*SE-ID	*TREATMENT-ID
B3	FACILITY FLOW DATA	*PWS-ID	*SE-ID	N/A
B4	TREATMENT PLANT ADDRESS DATA	*PWS-ID	*SE-ID	N/A
C1	GEOGRAPHIC AREAS SERVED	*PWS-ID	*GA-ID	N/A
C2	SERVICE AREAS	*PWS-ID	*SERV-ID	N/A
C3	ON-SITE VISITS	*PWS-ID	*VISIT-ID	N/A
C4	MILESTONE EVENTS	*PWS-ID	*MILESTONE-ID	N/A
D1	VIOLATION DATA	*PWS-ID	*VIOLATION-ID	N/A
E1	ENFORCEMENT DATA	*PWS-ID	*ENF-ID	N/A
F1	VARIANCES AND EXEMPTIONS	*PWS-ID	*VE-ID	N/A
F2	V AND E SCHEDULE	*PWS-ID	*VE-ID	*SCHED-ID
H1	SAMPLE DATA	*PWS-ID	*SAMPLE-ID	N/A

* *The data element numbers for the qualifiers listed above, are not valid data element numbers for use in the data element number area (positions 27-31) in the DTF record. Specifically, these data element numbers are C101, C301, C401, C481, C501, C601, C701, C801, C1101, C1201, C2101, C3001, and C3101.*

Secondary data address qualifiers are always required to permit SDWIS/FED to uniquely identify a specific record in those cases where multiple records for a PWS can exist (e.g., multiple sources). In such cases, the secondary data address qualifiers serve as essential "identification codes," permitting the automatic grouping of all related DTF records during processing. This ensures that the data from multiple Form-IDs for any PWS would not be inadvertently mixed.

The identification code can also be used to communicate to the SDWIS/FED system that the user wants SDWIS/FED to automatically generate the associated ID and post it to the data base. In these cases, the group code is prefixed with a "G" and it is referred to as a "Group Generation Code" (GGC). By design, GGCs are not retained in the data base but serve in a temporary capacity only: grouping related data together and triggering the automatic generation of unique ID numbers.

In those cases where the user decides to assign ID codes, and the secondary data address (i.e., ID) already exists in the data base, the record being inserted will be rejected as a duplicate ID. Since GGC numbers are not stored in the data base, however, such an error under the GGC concept is not possible. The drawback to system generated IDs is that the user does not have immediate access to them for subsequent updating or retrieval. After each update to the SDWIS/FED data base, however, the user may access the SDWIS/FED data base to determine the ID assigned by the system.

With the exception of the Y5000 and Z5000 enforcement transactions, one Data Transfer record is required for each data value (i.e., data element) to be entered into the SDWIS/FED data base. For example, when adding a System Address, up to seven Data Transfer records may be necessary since seven data elements are possible. Each Data Transfer record would contain the appropriate data value along with the Section ID, Data Address Qualifier(s), Action Code, Data Element Number, and Batch Sequence Number.

There is a maximum number of occurrences for these data elements that can occur in the Data Value Field for any DTF transaction. They are:

! ASSOCIATED VIOLATION RANGE (X5000)	A maximum of one BEGIN date and one END date may be used in the Data Value Field.
! ASSOCIATED VIOLATION IDS (Y5000)	A maximum of four VIOLATION IDS may be used in the Data Value Field.
! ASSOCIATED VIOLATION CONTAMINANT GROUPS (Z5000)	When using a 4-digit year in the Z5000 Begin Date, a maximum of two groups may be used in the Data Value Field. When

	using a 2-digit year in the Z5000 Begin date, a maximum of three groups may be used in the Data Value Field. An Associated Violation Contaminant Group consists of: TYPE, CONTAMINANT, and BEGIN DATE.
! ASSOCIATED J5000 GROUP (J5000)	A maximum of one ENFORCEMENT ACTION BEGIN DATE, ENFORCEABLE COMPLIANCE DATE, VIOLATION TYPE, and CONTAMINANT or RULE CODE may be used in the Data Value Field.

See Appendix A for examples of how the Data Transfer File records are related to encoded Data Capture Forms.

Position Concept

The term “POSITION” is used throughout this document, (e.g., “POSITIONS 1 - 3 must contain,” etc.). In order to avoid any possible confusion or misinterpretation, the following examples are given:

- “POSITION 1” (or “FIRST POSITION”) means LEFT-MOST.

- “POSITIONS 1 - 3” means position 1 is LEFT-MOST and position 3 is the RIGHT-MOST.

Data Removal Versus Data Base Record Deletion

The difference between data element or column removal and data base record (DBR) or row deletion is an important concept in the SDWIS/FED system. When a DBR is deleted, all values associated with all data elements in that DBR and the DBR itself are removed. When a data element value is removed, only its value is blanked out (initialized to a null value) in the DBR; other data element values in the same DBR remain unchanged.

DBR deletion is accomplished only through the use of the ACTION CODE “D” as demonstrated later in this document when discussing the Record Deletion Form. Data element value removal, however, is accomplished by entering an ACTION CODE of “M” (i.e., Modify) and a dollar sign ($) in the first (left-most) position of the data element value to be removed.

Note: Not all data element values can be removed. The Detailed Coding Instructions section of this document will discuss data element removal and data base record deletion in much greater detail.

CHAPTER III DATA BASE REGISTRATION REQUIREMENTS

The term “Registration Requirement” is used to define the minimum set of data that must be supplied.

Four registration requirement types exist. Two for operational reasons, and two for programmatic reasons. The definitions in the table on the next page are offered as an explanation of the rationale used in identifying why a specific data element value is needed by SDWIS/FED for the PWS to become registered.

Four types of Grant registration requirements define a PWS for a State grant allotment; Grant eligibility, Grant withholding, Conditional grant withholding, and Conditional grant eligibility. The following definitions are offered as an explanation of the rationale used in identifying why a specific data element value is needed by SDWIS/FED for the PWS to be counted.

Grant eligibility requirements are determined on a yearly basis. SDWIS/FED is used to determine the percentage of the total national PWSS grant allocation that will go to each state. Only systems that contain valid data for ALL of the grant eligibility data elements are considered in this calculation.

Unlike grant eligibility requirements, grant withholding elements are also tied to a State PWSS annual grant. These new grant elements WILL NOT be used up-front during the grant calculation process, but will be tracked by the Regions during the annual program review process including through data verification. When reporting deficiencies are noted, the possibility of grant withholding exists.

Data Base Registration Requirements

Registration Requirement **Definition**

1 OPERATIONALLY REQUIRED

The SDWIS/FED computer system cannot process data related to a PWS without a value for this data element.

Examples:
- PWS-ID to insert a new PWS.
- PWS-SE-RECORD-TYPE to insert a new source or other entity.

2 PROGRAMMATICALLY REQUIRED

Based upon programmatic need, EPA has determined that a value must always be reported for this data element for PWS inventory, violation, enforcement, sample, milestone or variance/exemption/other related data to be inserted into the SDWIS/FED data base.

Examples:
- PWS-TYPE to insert a new PWS.
- PWS-SE-CODE to insert a new source or entity.
- VIO-TYPE to insert a new violation.
- ENF-ACTION-DATE to insert a new enforcement.
- VE-RECORD-TYPE to insert a new variance/exemption.

3 OPERATIONALLY REQUIRED - CONDITIONALLY

Under certain circumstances, the SDWIS/FED computer system cannot process data related to a PWS without a value for this data element.

Examples
- VIO-ID if inserting a new violation.
- ENF-ID if inserting a new enforcement.
- VE-ID if inserting a new variance/exemption/other related data turbidity waiver, or filtration requirement event.

4 PROGRAMMATICALLY REQUIRED - CONDITIONALLY

Based upon programmatic need, EPA has determined that, under certain circumstances, a value must be reported for this data element for PWS inventory, violation, enforcement, sample, milestone or variance/exemption/other related data to be inserted into the SDWIS/FED data base.

Examples
- PWS-SEASON-BEGIN-MMDD and PWS-SEASON-END-MMDD if inserting a non-community PWS.
- VIO-CONTAMINANT if inserting an MCL or M/R violation.

GRANT ELIGIBILITY and GRANT WITHHOLDING Requirements

1 **GRANT ELIGIBILITY**

Based upon programmatic need, EPA has determined that a value must always be reported for these data elements for a system to be grant eligible

Examples:
- SYSTEM-NAME - Name of PWS.
- CITY - Name of City.
- STATE -Name of State.

2 **GRANT WITHHOLDING**

Based upon programmatic need, EPA will track the reporting of these data elements for the purpose of determining potential grant withholding. Absence of these elements could result in the system being subject to Grant Withholding.

Examples:
- PWS-SERV-CATEGORY.
- PWSS-SERV-PRIMARY-FLAG.
- PWS SYSTEM CITY.
- PWS-SYSTEM-STATE and ZIP CODE.

3 **CONDITIONALLY GRANT ELIGIBILITY**

There are currently no conditional grant eligibility requirements. All grant eligibility data elements are non-conditional.

Examples: None.

4 **CONDITIONALLY GRANT WITHHOLDING**

Based upon programmatic need, EPA will track the reporting of these data elements for the purpose of determining potential grant withholding. Absence of these elements, coupled with other conditions (such as the type of water systems, the date, or the presence or absence of other data) could result in the system being subject to grant withholding.

Examples:
- LATITUDE-DEC-DEG-MEASURE.
- LONGITUDE-DEC-DEG-MEASURE.
- SOURCE-TREATMENT-STATUS-FLAG.

CHAPTER IV RECORD IDENTIFICATION AND MAXIMUM OCCURRENCES

Except for data entered via Data Capture Form A, Sections A1 and A2 (which require only the PWS ID), ALL other data on the Data Capture Forms must have an accompanying record ID (i.e., secondary data address qualifiers). These IDs are used in SDWIS/FED to specifically identify DBR in the data base so the various transaction types (insert, delete, and modify) can be performed. For data being entered, the user has the option of assigning his or her own record ID or allowing the SDWIS/FED system to generate a unique record ID. The only exception to this is the PWS-ID, which must always be assigned by the user.

In some cases there is a difference in the length of the record ID, between what is defined in the *SDWIS/FED On-Line Data Dictionary* and what is shown on the Data Capture Forms. This is to allow room for the "Group Generation Code" (GGC), which signals the SDWIS/FED system to generate the record ID.

Additionally, several IDs have been expanded in length. Users may supply either the original format or the expanded format. In either case, however, the data base will be populated with the expanded value (original formats will have leading zeros added).

The SDWIS/FED system makes a special allowance for the use of the GGC in IDs defined as numeric. No other alphabetic characters are accepted in these IDs. **The SDWIS/FED system will not allow a mixture of user assigned IDs and GGCs in an update for a given record type, within a given PWS. For example, if two source records for the same PWS are to be inserted into the data base in the same update, BOTH SE IDs must be user assigned, or BOTH must use the GGC.** The following is a list of each record ID and the rules for their assignment or generation.

ID - (OTHER ADDRESSES)

The ID has been expanded to five positions. The user, however, may optionally continue to supply ID with the original format. Rules for formatting ADDRESS ID are as follows:

Original Format:

If the user wants to assign the ID...

- Position 1 must be greater than or equal to 1 and less than or equal to 9.

If the user wants the SDWIS/FED system to generate an ID...

- Position 1 of the ID must contain the letter “G.”
- Position 2 must be greater than or equal to 1 and less than or equal to 9.

Expanded Format:

If the user wants to assign the ID...

- Positions 1 - 5 must be numeric.

If the user wants the SDWIS/FED system to generate an ID...

- Position 1 of the ID must contain the letter “G.”
- Positions 2 - 5 must be greater than or equal to 0001 and less than or equal to 9999.

When ID is assigned by the user or is computer generated, a maximum of 200 address records may be entered in any single update for a given PWS.

SE ID - (SOURCE / ENTITY DATA)

The SE ID has been expanded to allow users to enter up to seven alphanumeric characters. Embedded blanks and special characters are not allowed with the exception of a dash “-.” No leading blanks are allowed and will be rejected.

The SE ID cannot be all zeros or a combination of zeros and spaces; otherwise it will be rejected.

“G0, G00, G000, G0000, G00000, G000000” are valid and different and are accepted as a character value rather than a GGC.

- Before matching a facility ID on the database, the SE ID in the DTF file is reformatted by removing leading zeros until a non-zero number, alphabetic character, or dash is met. It is then left-justified. Facility IDs are stored in this new format on the database. For example: 005BA becomes 5BA, 0008 becomes 8. EB001, T01, and G01A will remain the same value.

- If a user submits treatments that are associated to a source facility, a generated treatment plant facility shall be created with an SE ID consisting of the “reformatted”

SE ID of the source followed by a "T" (e.g., 00ABCT would generate ABCTT, 001 would generate 1T.) This value is left-justified in the database.

Note: Having an alphanumeric generated treatment plant ID will not keep users from identifying which treatment plants are generated because when a source is connected to a generated treatment plant, the software automatically sets TINWSFF:TYPE_CODE to "G," to specify that the source is connected to a generated treatment plant.

! If the reformatted SE ID for a source, with a generated treatment plant, consists of seven characters, the B2 form is rejected with a message saying sources with generated treatment plants must have an SE ID of six or fewer characters.

This is rejected because a seven character source SE ID will generate an eight character SE ID for the generated treatment plant (i.e., a "T" is added). Users will be able to delete generated treatment plants as described above; they will not be able to do this if the ID is greater than seven characters.

! A group generation code (GGC) may be entered on the B1, B1(2), B2, and B4 forms consisting of a "G" in the first position followed by a number between 1 and 999999. Leading zeros followed by a "G" and a number will be treated as a GGC.

The number generated is calculated by taking the highest "all numeric" facility ID for that PWS and adding 1. The generated facility ID is stored in the database as left-justified with no leading zeros. If a "G" is entered in the first position and 1 or more of the remaining positions contain a letter or dash, the ID will not be treated as a GGC.

! The system will continue to reject B3 forms with a Qualifier 2 or data value (A5000) with a value for a GGC (e.g., G01). The system will also continue to reject B4 or B5 forms with a Qualifier 2 having a value for a GGC.

! The system will modify the software to accept B3 forms with a Qualifier 2 or data value pointing to a generated treatment plant on the database. The system will also accept B4 forms with a Qualifier 2 pointing to a generated treatment plant. Note that with the new alphanumeric format, a numeric facility ID ending with a "T" can be a user supplied ID or a generated treatment plant ID. The software currently rejects a numeric ID ending with a "T" (e.g., 0001T) for Qualifier 2 and the data value on a B3 form. Likewise, it rejects a numeric Qualifier 2 ending with a "T" on the B4 form.

- The system will continue to accept B5 forms with a Qualifier 2 pointing to a generated treatment plant.

  Currently, for B1 - B4 forms, users can submit up to a five digit number for the SE ID and the software will zero fill. On the B1, B1(2), and B2 forms, it can also be entered as a GGC consisting of a "G," followed by a number between 1 and 9999.

  Currently for the B5 form the SE ID must be zero filled and numeric or contain four numbers followed by a "T" to denote a generated treatment plant.

- D form changes: Users may enter up to a seven character SE ID for: 1) C1143 when entering the SE ID for a violation, and 2) C1145 when entering Source Entity ID in the underlying violation criteria for Type 75 PN violations. C1143 and C1145 underlying SE ID are input and reformatted as described above.

- F Forms: Users may enter up to a seven character VE SE ID for C3031 for a variance or exemption. C3031 is input and reformatted as described above. Note: C3031 is stored in TFRDEVIA as an associated foreign key of the facility.

- H1 Form change: Users may enter up to a seven character SE ID for C2119 for a sample. C2119 is input and reformatted as described above. Note: C2119 is stored in TFRSAMPL as an associated foreign key of the facility.

  Currently, users can submit up to a five digit number for the SE ID on the D, F, and H forms and the software will zero fill.

- Database Conversion: For all records in the following tables, the software will remove leading zeros in ST_ASGN_IDENT_CD as described in above and left-justify so that the value in the database will match with DTF facility IDs after they are reformatted:

  - TINWSF and TFRVIOL Tables in the SDWIS/FED environment.
  - TINWSF Table in UCMR environment (Schema PWSSPUCM).

  For all records in the TFRVIOL Tables in the SDWIS environment, the software will remove leading zeros in PN_UND_C_SE_ID as described above and left-justify so that the value in the database will match with DTF facility ID after it is reformatted.

- The software will allow users to delete a generated treatment plant, as with any other facility, by submitting a C0400 transaction with a qualifier 2 containing the facility ID suffixed by a "T."

The software will continue to allow users to delete generated treatment plants by deleting treatments associated with the source linked to the generated treatment plant. This deletes the generated treatment plant and the link to the source.

Note: The SE IDs described above are the only ones that need to be expanded. SE ID entered on the B2, B3, B4, and Sampling Points (B5) forms are stored as a foreign key in their respective databases (i.e., IS number associated to the SE ID.)

Whether an SE ID is assigned by the user or computer generated, a maximum of 300 source entity records may be entered in any single update for a given PWS.

TREATMENT ID - (TREATMENT DATA)

The TREATMENT ID has been expanded to five positions. The user, however, may optionally continue to supply ID with the original format. Rules for formatting TREATMENT ID are as follows:

Original Format:

If the user wants to assign the TREATMENT ID...

- Positions 1 - 2 must be greater than or equal to 01 and less than or equal to 99.

If the user wants the SDWIS/FED system to generate an TREATMENT ID...

- Position 1 must contain the letter “G.”
- Positions 2 - 3 must be greater than or equal to 01 and less than or equal to 99.

Expanded Format:

If the user wants to assign the TREATMENT ID...

- Positions 1 - 5 must be numeric.

If the user wants to have the SDWIS/FED system generate the TREATMENT ID...

- Position 1 must contain the letter “G.”
- Positions 2 - 5 must be greater than or equal to 0001 and less than or equal to 9999.

When TREATMENT ID is assigned by the user, a maximum of 40 treatment records may be entered in any single update for a given SOURCE, or other ENTITY. When TREATMENT ID is computer generated, a maximum of 40 treatment records may be entered in any single update for a given SOURCE.

GA ID - (GEOGRAPHIC AREAS SERVED)

The GA ID has been expanded to five positions. The user, however, may optionally continue to supply ID with the original format. Rules for formatting GA ID are as follows:

Original Format:

If the user wants to assign the GA ID...

- Positions 1 - 2 must be greater than or equal to 01 and less than or equal to 99.

If the user wants the SDWIS/FED system to generate a GA ID...

- Position 1 must contain the letter “G.”
- Position 2 must be greater than or equal to 1 and less than or equal to 9.

Expanded Format:

If the user wants to assign the GA ID...

- Positions 1 - 5 must be numeric.

If the user wants to have the SDWIS/FED system generate the GA ID...

- Position 1 must contain the letter “G.”
- Positions 2 - 5 must be greater than or equal to 0001 and less than or equal to 9999.

When GA ID is assigned by the user, a maximum of 1,000 geographic areas served records may be entered in any single update for a given PWS. When GA ID is computer generated, a maximum of 1,000 geographic areas served records may be entered in any single update for a given PWS.

SERV ID - (SERVICE AREAS)

The SERV ID has been expanded to five positions. The user, however, may optionally continue to supply ID with the original format. Rules for formatting SERV ID are as follows:

Original Format:

If the user wants to assign the SERV ID...

- Positions 1 - 2 must be greater than or equal to 01 and less than or equal to 99.

If the user wants the SDWIS/FED system to generate a SERV ID...

- Position 1 must contain the letter “G.”
- Position 2 must be greater than or equal to 1 and less than or equal to 9.

Expanded Format:

If the user wants to assign the SERV ID...

- Positions 1 - 5 must be numeric.

If the user wants to have the SDWIS/FED system generate the SERV ID...

- Position 1 must contain the letter “G.”
- Positions 2 - 5 must be greater than or equal to 0001 and less than or equal to 9999.

When SERV ID is assigned by the user, a maximum of 1,000 service area records may be entered in any single update for a given PWS. When SERV ID is computer generated, a maximum of 1,000 service area records may be entered in any single update for a given PWS.

VISIT ID - (ON-SITE VISITS)

Original Format:

If the user wants to assign the VISIT ID...

- Positions 1 - 2 must be greater than or equal to 01 and less than or equal to 99.

If the user wants the SDWIS/FED system to generate a VISIT ID...

- Position 1 must contain the letter “G.”
- Position 2 must be greater than or equal to 1 and less than or equal to 9.

Expanded Format:

If the user wants to assign the VISIT ID...

- Positions 1 - 5 must be numeric.

If the user wants to have the SDWIS/FED system generate the VISIT ID....

- Position 1 must contain the letter “G.”
- Positions 2 - 5 must be greater than or equal to 0001 and less than or equal to 9999.

Whether user-supplied or GGC, the SDWIS/FED system will automatically generate the VISIT ID. A maximum of 1,000 on-site visit records may be entered in any single update for a given PWS.

MILESTONE ID - (MILESTONE EVENTS DATA)

If the user wants to assign the MILESTONE ID...

- Positions 1 - 4 must be greater than or equal to 0001 and less than or equal to 9999.

If the user wants to have the SDWIS/FED system generate the MILESTONE ID...

- Position 1 must contain the letter “G.”
- Positions 2 - 4 must be greater than or equal to 001 and less than or equal to 999.

When MILESTONE ID is assigned by the user, a maximum of 200 milestone records may be entered in any single update for a given PWS. When MILESTONE ID is computer generated, a maximum of 200 milestone records may be entered in any single update for a given PWS and Position 1 of the generated ID will contain the letter "M."

MILESTONE DATA is considered part of the Inventory data and, thus, must be submitted accordingly.

VIOLATION ID - (VIOLATION DATA)

If the user wants to assign the VIOLATION ID...

- Positions 1 - 2 must be greater than or equal to 78 and less than or equal to the current federal Fiscal Year (FY).

- Positions 3 - 7 must be greater than or equal to 00001 and less than or equal to 99999.

If the user wants the SDWIS/FED system to generate the VIOLATION ID...

- Positions 1 - 2 must be greater than or equal to 78 and less than or equal to the current federal FY.

- Position 3 must contain the letter "G."

- Positions 4 - 7 must be greater than or equal to 0001 and less than or equal to 9999.

When the VIOLATION ID is assigned by the user, a maximum of 600 violation records may be entered in any single update for a given PWS. When the VIOLATION ID is computer- generated, a maximum of 600 violation records may be entered in any single update for a given PWS. Position 3 of the generated ID will contain the letter "V."

ENFORCEMENT ID - (ENFORCEMENT DATA)

If the user wants to assign the ENFORCEMENT ID...

- Positions 1 - 2 must be greater than or equal to 78 and less than or equal to the current federal FY.

- Positions 3 - 7 must be greater than or equal to 00001 and less than or equal to 99999.

If the user wants the SDWIS/FED system to generate the ENFORCEMENT ID...

- Positions 1 - 2 must be greater than or equal to 78 and less than or equal to the current federal FY.

- Position 3 must contain the letter “G.”

- Positions 4 - 7 must be greater than or equal to 0001 and less than or equal to 9999.

When ENFORCEMENT ID is assigned by the user, a maximum of 200 enforcement records may be entered in any single update for a given PWS. When ENFORCEMENT ID is computer generated, a maximum of 200 enforcement records may be entered in any single update for a given PWS. Position 3 of the generated ID will contain the letter “E.”

In addition, a maximum of 500 links per enforcement may be entered.

VE ID - (VARIANCES, EXEMPTIONS AND OTHER RELATED DATA)

If the user wants to assign the VE ID...

- Positions 1 - 2 must be greater than or equal to 78 and less than or equal to the current federal FY.

- Positions 3 - 7 must be greater than or equal to 00001 and less than or equal to 99999.

If the user wants the SDWIS/FED system to generate the VE ID...

- Positions 1 - 2 must be greater than or equal to 78 and less than or equal to the current federal FY.

- Position 3 must contain the letter “G.”

- Positions 4 - 7 must be greater than or equal to 0001 and less than or equal to 9999.

When VE ID is assigned by the user, a maximum of 50 variances, exemptions AND other related data records may be entered in any single update for a given PWS. When VE ID is computer generated, a maximum of 50 variances, exemptions AND other related data records may be entered in any single update for a given PWS. Position 3 of the generated ID will contain the letter “X.”

SCHEDULE ID - (VE SCHEDULE)

If the user wants to assign the SCHEDULE ID...

- Positions 1 - 2 must be greater than or equal to 01 and less than or equal to 99.

If the user wants the SDWIS/FED system to generate the SCHEDULE ID...

- Position 1 must contain the letter "G."

- Position 2 must be greater than or equal to 1 and less than or equal to 9.

When SCHEDULE ID is assigned by the user, a maximum of 50 schedule records may be entered in any single update for a given variance and exemption record. When SCHEDULE ID is computer generated, a maximum of 9 schedule records may be entered in any single update for a given variance and exemption record.

SAMPLE ID - (SAMPLE DATA)

If the user wants to assign the SAMPLE ID...

- Positions 1 - 6 must be greater than or equal to 000001 and less than or equal to 999999.

If the user wants to have the SDWIS/FED system generate the SAMPLE ID...

- Position 1 must contain the letter "G."

- Positions 2 - 6 must be greater than or equal to 00001 and less than or equal to 99999.

When SAMPLE ID is assigned by the user, a maximum of 2,300 sample records may be entered in any single update for a given PWS. When SAMPLE ID is computer generated, a maximum of 2,300 sample records may be entered in any single update for a given PWS. Position 1 of the generated ID will contain the letter "S."

For Unregulated Contaminant Monitoring (UCM) reporting, there is a "wild card" method of entering data where results are below the method detection limit (MDL). MDL Unregulated Expansion Codes (UECs) enable users to enter a single transaction for all analytes comprising the GROUPS 1, 3, and 4 (as specified in the UCM Guidance). Due to the fact that one input transaction may generate many update transactions, only GGCs will be accepted for SAMPLE

IDs when using this feature. See CHAPTER VII, "Detailed Coding Instructions" and the *SDWIS/FED On-Line Data Dictionary* for detailed information on UCM Reporting.

SAMPLE DATA is to be submitted separately and can not be included with Inventory or Action Data.

CHAPTER V GENERAL CODING INSTRUCTIONS

DATES

Data Transfer Format

Throughout DTF, there are many areas where dates may be entered. Additionally, there are three different formats in which these dates are represented. These formats include the following:

YR MO	(Year and Month)
MO DAY	(Month and Day)
MO DAY YR	(Month, Day, and Year)

When dates are entered, the applicable month, day, and year must be left-justified and zero-filled. The examples below demonstrate the correct and incorrect methods of entering the date of March 7, 1998.

	CORRECT	INCORRECT
YR MO	9803	983
MO DAY	0307	307
MO DAY YR	030798	3 798

Dates on the Data Capture Forms follow EPA Year 2000 Compliance format.

Year 2000 Compliance Format

YYYY MM	(Year and Month)
MM DD	(Month and Day)
YYYY MM DD	(Year, Month, and Day)

Where: YYYY = Year
MM = Month
DD = Day

When dates are entered, the applicable year, month, and day must be left-justified and zero-filled. DTF will also accept the date as shown on Data Capture Forms. The examples shown below demonstrate the correct and the incorrect methods of entering the date of March 7, 1998.

	CORRECT	INCORRECT
YYYYMM	199803	19983
MMDD	0307	307
YYYYMMDD	19980307	3 71998

DECIMALS

When entering numbers into data elements defined as decimal, the user should be aware of the following constraints:

- The maximum number of Positions (as determined by the rules for the data element involved) in the integer portion or the decimal portion of the number being entered, cannot be exceeded.

- A whole number may be entered without the decimal point, as long as it does not exceed the length of the defined integer portion of the number.

- The fractional portion of a decimal number MUST be preceded by a decimal point.

Decimal data element values not meeting the above criteria will be rejected by the SDWIS/FED system.

EXAMPLE: Consider the decimal data element REACH MILES, which is defined as 9(4).9(2) - (a four Position integer and a two position decimal).

INPUT	RESULT
1234.56	1234.56
1	0001.00
1.1	0001.10
1234	1234.00
123456	REJECTED
0.01	0000.01
0.001	REJECTED
12345.6	REJECTED

SPECIAL CHARACTERS

SDWIS/FED will accept most special characters.

CHAPTER VI INFORMATION COMMON TO ALL DATA CAPTURE FORMS

All Data Capture Forms have several items in common. These include, PWS ID, ACTION CODE, Batch Sequence Number, and SECTION TYPE. Use of these items is as follows:

PWS ID (C101)

This is an alphanumeric value used to uniquely identify a PWS. PWS ID is always prefixed with a valid United States Postal Service (USPS) State abbreviation or EPA Region code, which is then followed by a 7-character identifier unique for each PWS within that State or Region. The following rules apply when specifying PWS ID:

- Positions 1 - 2 must be a valid USPS State code or for Indian Lands, an EPA Region code from 01 through 10 should be used where applicable.
- Positions 3 - 9 must be unique for each PWS within a State.
- Positions 3 - 9 may contain alphanumeric characters A-Z or 0-9.
- Positions 3 - 9 must not contain any special characters (i.e., other than A-Z or 0-9).

ACTION CODE

This is an alphabetic value determining the action that the SDWIS/FED system will take with the specified data. ACTION CODES must always be specified and must be one of the following three values:

- D (DELETE)

This ACTION CODE causes an entire Data Base Record (DBR) table or row to be deleted from the SDWIS/FED data base. In order for a DBR to be deleted, it must exist in the data base. When a violation record is deleted, all RELATED enforcement records will also be deleted. However, enforcement records related to other violations as well, will NOT be deleted. Similar actions: Delete source entity record and the related treatments will be deleted; delete variance/exemption record and the related schedules will be deleted. This action code is only used on the Record Deletion Form (page 101).

- I (INSERT)

This ACTION CODE causes a new DBR to be inserted into the SDWIS/FED data base. DBRs with duplicate record IDs are not allowed in the SDWIS/FED data base. If a record being added has a record ID already existing in the data base, it will not be inserted.

- M (MODIFY)

This ACTION CODE causes the current value of a data element in an already existing DBR to be modified. Modifying the current value includes changing an existing value as well as both the insertion of a data value where it was previously blank and the removal (blanking out) of an existing data value. This can be accomplished by entering a dollar sign ($) in the first position (left-most) of the data element whose value is to be removed. Some data elements in the SDWIS/FED data base may not be removed. Refer to the Data Registration Tables (following the data entry instructions for each record type) to see if removal is allowed. Also, see "DATA ELEMENT REMOVAL VS. DATA BASE RECORD DELETION" for additional information.

Batch Sequence Number

The Batch Sequence Number's only function is to, where desired, time sequence the updating of the data base. It may be any calendar date. Time sequencing determines the order of processing of duplicate transaction types (e.g., two violation transactions with the same PWS ID and the same VIOLATION ID), by inserting the transaction with the higher Batch Sequence Number last. In other words, the transaction with the lower Batch Sequence Number will be "overlaid" by the transaction with the higher Batch Sequence Number. Currently, the software accommodates the use of dates for batch sequencing, manipulating the earlier date to the lower sequence number.

When inserting a PWS using the "traditional update" mode, (i.e., updates that are not total replace), all "registration requirement" data elements for the PWS must be submitted with the same Batch Sequence Number.

When transactions are submitted as a "total replace," Batch Sequence Number is ignored by the SDWIS/FED system.

FORM TYPE

This is the letter/number combination (e.g., A1, A2, etc.) appearing in the boxes on the left hand side of the Data Capture Forms. This data is always required in order to ensure proper data placement or deletion.

CHAPTER VII DETAILED CODING INSTRUCTIONS

This chapter gives detailed coding instructions for each data element entered into the SDWIS/FED data base. It has been designed to be used along with the *SDWIS/FED On-Line Data Dictionary*.

Data Capture Form A

SECTION A1 SYSTEM ADDRESS (See Exhibit 1)

This section is used to enter facility name and address information for a PWS. Where multiple facilities exist for a PWS at different locations, this section should be used to enter address information for the system as a whole. The following is entered via this section:

SYSTEM NAME
(C131)

Enter the name of the PWS. Up to 40 positions may be specified and any combination of alphabetic, numeric or special characters is allowed. SYSTEM NAME can be the formal, legal, or common name used most generally in referring to the PWS.

RESPONSIBLE PARTY
(C132)

Enter the name of the RESPONSIBLE PARTY. Up to 30 positions may be specified and any combination of alphabetic, numeric or special characters is allowed.

ADDRESS LINE 1
(C133)

Enter the first line of an address applicable to a PWS addressee or facility. This can be an additional address line applicable to the location of a PWS addressee or facility.

ADDRESS LINE 2
(C135)

Enter address data such as the street address, rural route and/or box designation, etc., applicable to the primary facility location of the PWS. If a street address or rural route and/or box number does not exist for the PWS, do not provide this data.

CITY
(C137)

Enter the city name applicable to the primary facility location of the PWS.

STATE
(C139)

Enter the United States Postal Service (USPS) State abbreviation applicable to the primary facility location of the PWS.

COUNTRY CODE
(C140)

Enter the country code applicable to the primary facility location of the PWS.

Note: Default is US (United States). If the country code is CA (Canada), you must provide a valid Province code (State Code).

ZIP CODE + 4
(C141)

Enter the ZIP CODE +4 applicable to the primary facility location of the PWS. If the +4 portion of the zip code is unknown, leave that portion blank.

Note: Do not include a ZIP code if the country code is valued (i.e., non-US)

INTERNATIONAL POSTAL CODE
(C142)

Enter the International Postal Code applicable to the primary facility location of the PWS.

Note: This is an optional field; do not include a International Postal Code if the country code is US or blank.

TELEPHONE NUMBER (AREA CODE AND NUMBER)
(C143)

Enter the telephone number of the PWS. TELEPHONE NUMBER identifies the area code and phone number applicable to the primary facility of, or the principal contact person for, the PWS. If the AREA CODE is unknown, the 7-digit phone number may be entered by itself.

SECTION A1 - SYSTEM ADDRESS
DATA ELEMENT REGISTRATION TABLE

DATA ELEMENT NUM	FORM REFERENCE NAME	A/N/D	JUST	SIN	ZERO FILL	REG. CODE	GRANT	CBR
C131	SYSTEM NAME	A	L				1	Y
C132	RESPONSIBLE PARTY	A	L				2*	Y
C133	ADDRESS LINE 1	A	L	Y			4*	Y
C135	ADDRESS LINE 2	A	L	Y			4*	Y
C137	CITY	A	L				2*	Y
C139	STATE	A	L				2*	Y
C140	COUNTRY CODE	A	L				4	Y
C141	ZIP CODE + 4**	A	L				2*	Y
C142	INTERNATIONAL POSTAL CODE	A	L					Y
C143	TELEPHONE	A	L	Y				Y

* For Grant Eligibility and Withholding determinations, may be reported on either the A1 form or an A3 form with a Type Code of “AC.”

** At least the 5-digit zip code is required for the PWS to be considered grant eligible.

LEGEND:

A/N/D	A = ALPHANUMERIC, N = NUMERIC, D = DECIMAL
JUST	L = LEFT JUSTIFY, R = RIGHT JUSTIFY, A = ALIGN
SIN	Y = SKIP IF NONE OR NOT APPLICABLE
ZERO FILL	Y = ENTER PRECEDING ZEROS OR ZERO FILL REMAINING DECIMAL PLACES
REG. CODE	1 = OPERATIONALLY REQUIRED 2 = PROGRAMMATICALLY REQUIRED 3 = OPERATIONALLY REQUIRED, CONDITIONALLY 4 = PROGRAMMATICALLY REQUIRED, CONDITIONALLY

(SEE CHAPTER III, "DATA BASE REGISTRATION REQUIREMENTS,” FOR FURTHER EXPLANATION)

GRANT	1 = GRANT ELIGIBLE 2 = GRANT WITHHOLDING 3 = CONDITIONALLY GRANT ELIGIBLE 4 = CONDITIONALLY GRANT WITHHOLDING
CBR	Y = CAN BE REMOVED (i.e., $ IN LEFT-MOST POSITION) N = CANNOT BE REMOVED

NOTE: Required Data Elements are depicted in RED on electronic copies of the Data Capture Forms. These will appear as grey on hard copy.

SECTION A2 PUBLIC WATER SYSTEM CHARACTERISTICS (See Exhibit 1)

This section is used to enter data related to the various physical characteristics of the public water system. The following is entered via this section:

PWS ID
(C101)

See Chapter VI for a discussion of this data element.

PWS TYPE
(C105)

A community water system (CWS) is a PWS which serves at least 15 service connections used by year-round residents or regularly serves at least 25 year-round residents.

A transient non-community water system (TNCWS) is a PWS that is not a community or a non-transient non-community water system.

A non-transient non-community water system (NTNCWS) is a PWS that is not a community water system and regularly serving at least 25 of the same persons over six months per year.

Valid codes may be found in the *SDWIS/FED On-Line Data Dictionary*.

ACTIVITY FLAG
(C107)

Enter an "A" if the PWS is active or an "I" if the water system is inactive. If an "I" is entered for an inactive PWS, DEACTIVATION DATE must also be specified.

DEACTIVATION DATE (YEAR AND MONTH)
(C113)

Enter the year and month the system was deactivated. For example, January, 1998 would be entered as either 9801 (old format) or 199801 (new format). DEACTIVATION DATE must be specified if ACTIVITY FLAG is an "I" (inactive).

RETAIL POPULATION SERVED
(C117)

Enter the number of retail customers served by the PWS. If the PWS has large seasonal fluctuations in the number of retail customers served, enter the average

number of customers served. When RETAIL POPULATION SERVED is specified, the following rules apply:

- Must be numeric.
- Must be greater than or equal to 1.
- Should be greater than or equal to 25 if C147, RETAIL SERVICE CONNECTIONS, is less than 15.

RETAIL POPULATION SERVED can be zero if no retail population is served and a service area characteristic (see Data Capture Form C, Section C2) identifies the PWS as a wholesaler of water.

PERCENT SURFACE
(C121)

Enter the annual average percentage of water obtained from non-purchased, permanently available surface water sources. The total of this percentage along with PERCENT GROUND, PERCENT PURCHASED SURFACE, and PERCENT PURCHASED GROUND should be equal to 100.

If the PWS has only one source of water, or if all sources are of the same type, this data does not have to be specified. When PERCENT SURFACE is specified, the following rules apply:

- Must be numeric.
- Must be greater than or equal to zero.
- Should be less than or equal to 100.
- Must not contain a percent sign (%) or decimal point (.).

PERCENT GROUND
(C123)

Enter the annual average percentage of water obtained from non-purchased, permanently available ground water sources. The total of this percentage along with PERCENT SURFACE, PERCENT PURCHASED SURFACE, and PERCENT PURCHASED GROUND should be equal to 100.

If the PWS has only one source of water, or if all sources are of the same type, this data does not have to be specified. When PERCENT GROUND is specified, the following rules apply:

- Must be numeric.
- Must be greater than or equal to zero.
- Should be less than or equal to 100.
- Must not contain a percent sign (%) or decimal point (.).

PERCENT PURCHASED SURFACE
(C125)

Enter the annual average percentage of water obtained from purchased, permanently available surface water sources. The total of this percentage along with PERCENT SURFACE, PERCENT GROUND, and PERCENT PURCHASED GROUND should be equal to 100.

If the PWS has only one source of water, or if all sources are of the same type, this data does not have to be specified. When PERCENT PURCHASED SURFACE is specified, the following rules apply:

- Must be numeric.
- Must be greater than or equal to zero.
- Should be less than or equal to 100.
- Must not contain a percent sign (%) or decimal point (.).

PERCENT PURCHASED GROUND
(C127)

Enter the annual average percentage of water obtained from purchased, permanently available ground water sources. The total of this percentage along with PERCENT SURFACE, PERCENT GROUND, and PERCENT PURCHASED SURFACE should be equal to 100.

If the PWS has only one source of water, or if all sources are of the same type, this data does not have to be specified. When PERCENT PURCHASED GROUND is specified, the following rules apply:

- Must be numeric.
- Must be greater than or equal to zero.
- Should be less than or equal to 100.
- Must not contain a percent sign (%) or decimal point (.).

RETAIL SERVICE CONNECTIONS
(C147)

Enter the number of retail service connections a PWS had in the most recent year. When this data element is specified, the following rules apply:

- Must be numeric.
- Should be greater than or equal to 15 if RETAIL POPULATION SERVED is less than 25.

AVG DAILY PROD
(C149)

Enter the number of gallons representing the average daily quantity of water produced by a public water system in the most recent year. AVG DAILY PROD is calculated by adding together the total gallons of water produced in a year by each treatment or pumping facility, and dividing that sum by the total number of days that at least one treatment or pumping facility was in operation.

DESIGN CAPACITY
(C151)

Enter the number of gallons per day representing the total quantity of water a public water system was designed and approved to produce. DESIGN CAPACITY is calculated by adding together the approved design capacity of each treatment or pumping facility.

EMERGENCY PROD
(C153)

Enter the number of gallons per day representing the total quantity of water that can be produced by a public water system using emergency power generation equipment under

its control. EMERGENCY PROD is calculated by adding together the emergency power production capacity of each treatment or pumping facility.

STORAGE CAPACITY
(C155)

Enter the number of gallons representing the total quantity of water that can be stored by a public water system. STORAGE CAPACITY is calculated by adding together the storage capacity of each water storage facility.

NON-COMMUNITY SEASON BEGIN (MONTH AND DAY)
(C159)

Enter the month and day a non-community or non-transient non-community water system's season of operation normally begins. For example, October 9 would be entered as 1009. If entering a community PWS, do not provide this data. Mutually required with data element C161.

NON-COMMUNITY SEASON END (MONTH AND DAY)
(C161)

Enter the month and day a non-community or non-transient non-community water system's season of operation normally ends. For example, October 9 would be entered as 1009. If entering a community PWS, do not provide this data. Mutually required with data element C159.

OWNER TYPE
(C163)

Enter the code value identifying the type of owner of a PWS. Valid owner type codes may be found in the *SDWIS/FED On-Line Data Dictionary*.

SECTION A2 - PUBLIC WATER SYSTEM CHARACTERISTICS
DATA ELEMENT REGISTRATION TABLE

DATA ELEMENT NUM	FORM REFERENCE NAME	A/N/D	JUST	SIN	FILL	ZERO REG. CODE	GRANT	CBR
C101	PWS ID	A	N/A			1	1	N
C105	PWS TYPE	A	N/A			2	1	N
C107	ACTIVITY FLAG	A	N/A			2	1	N
C113	DEACTIVATION DATE	N	L	Y	Y	4		Y
C117	RETAIL POPULATION SERVED	N	L			2	1	N
C121	PERCENT SURFACE	N	L	Y				Y
C123	PERCENT GROUND	N	L	Y				Y
C125	PERCENT PURCHASED SURFACE	N	L	Y				Y
C127	PERCENT PURCHASED GROUND	N	L	Y				Y
C147	RETAIL SERVICE CONNECTIONS	N	L			2	1	N
C149	AVG DAILY PROD	N	L	Y				Y
C151	DESIGN CAPACITY	N	L	Y				Y
C153	EMERGENCY PROD	N	L	Y				Y
C155	STORAGE CAPACITY	N	L	Y				Y
C159	NON-COMMUNITY SEASON BEGIN	N	L	Y	Y			Y
C161	NON-COMMUNITY SEASON END	N	L	Y	Y			Y
C163	OWNER TYPE	A	N/A				2	Y

LEGEND:

A/N/D	A = ALPHANUMERIC, N = NUMERIC, D = DECIMAL
JUST	L = LEFT JUSTIFY, R = RIGHT JUSTIFY, A = ALIGN
SIN	Y = SKIP IF NONE OR NOT APPLICABLE
ZERO FILL	Y = ENTER PRECEDING ZEROS OR ZERO FILL REMAINING DECIMAL PLACES
REG. CODE	1 = OPERATIONALLY REQUIRED 2 = PROGRAMMATICALLY REQUIRED 3 = OPERATIONALLY REQUIRED, CONDITIONALLY 4 = PROGRAMMATICALLY REQUIRED, CONDITIONALLY

(SEE CHAPTER III, "DATA BASE REGISTRATION REQUIREMENTS," FOR FURTHER EXPLANATION)

GRANT	1 = GRANT ELIGIBLE 2 = GRANT WITHHOLDING 3 = CONDITIONALLY GRANT ELIGIBLE 4 = CONDITIONALLY GRANT WITHHOLDING
CBR	Y = CAN BE REMOVED (i.e., $ IN LEFT-MOST POSITION) N = CANNOT BE REMOVED

SECTION A3 OTHER ADDRESS(ES) (See Exhibit 2)

This section is used to enter additional address information, such as an owner address or related facility addresses. The following is entered via this section:

ID
(C301)

Enter a numeric value uniquely identifying an owner address, treatment facility address, or other address related to the PWS. ID must be valued for a new address record to be inserted into the SDWIS/FED data base.

See CHAPTER IV, "Record Identification and Maximum Occurrences" for user assignment and automatic generation of this ID.

TYPE
(C303)

Enter the code value identifying the type of addressee or facility of a PWS. The address type codes are contained in the *SDWIS/FED On-Line Data Dictionary*. TYPE must be valued for a new address record to be inserted into the SDWIS/FED data base.

ADDRESSEE NAME
(C305)

Enter the name of an addressee or facility of a PWS. Any combination of alphabetic, numeric, or special characters is allowed.

ADDRESS LINE 1
(C307)

Enter the first line of an address applicable to a PWS addressee or facility. This can be an additional address line applicable to the location of a PWS addressee or facility.

ADDRESS LINE 2
(C309)

Enter the second line of an address applicable to a PWS addressee or facility. ADDRESS LINE 2 is the street, rural route and box designation, etc., applicable to the location of a PWS addressee or facility CITY.

CITY
(C311)

Enter the city in which a PWS addressee or facility is located.

STATE
(C313)

Enter the USPS State abbreviation in which a PWS addressee or facility is located.

COUNTRY CODE
(C314)

Enter the country code applicable to the primary facility location of the PWS.

Note: Default is US (United States). If the country code is CA (Canada), you must provide a valid Province code (State Code).

ZIP CODE + 4
(C315)

Enter the ZIP CODE +4 applicable to the primary facility location of the PWS. If the +4 portion of the zip code is unknown, leave that portion blank.

Note: Do not include a ZIP code if the country code is valued (i.e., non-US)

INTERNATIONAL POSTAL CODE
(C316)

Enter the International Postal Code applicable to the primary facility location of the PWS.

Note: This is an optional field; do not include a International Postal Code if the country code is US or blank.

SECTION A3 - OTHER ADDRESS(ES)
DATA ELEMENT REGISTRATION TABLE

DATA ELEMENT NUM.	FORM REFERENCE NAME	A/N/D	JUST	SIN	ZERO FILL	REG. CODE	GRANT	CBR
C301	ID	N	L			3		N
C303	TYPE	A	N/A			4		N
C305	ADDRESSEE NAME	A	L				2*	Y
C307	ADDRESS LINE 1	A	L	Y			2*$	Y
C309	ADDRESS LINE 2	A	L	Y			2*$	Y
C311	CITY	A	L				1*	Y
C313	STATE	A	L				1*	Y
C314	COUNTRY CODE	A	L				4	Y
C315	ZIP CODE + 4 **	A	L				1*	Y
C316	INTERNATIONAL POSTAL CODE	A	L					Y

* For Grant Eligibility and Withholding determinations, may be reported on either the A1 form or an A3 form with a Type Code of “AC.”

*$ Address Line 1 or Address Line 2 are required to meet grant withholding requirements.

** Provide 9-digit zip code if known - 5-digit zip code is acceptable

LEGEND:

A/N/D	A = ALPHANUMERIC, N = NUMERIC, D = DECIMAL
JUST	L = LEFT JUSTIFY, R = RIGHT JUSTIFY, A = ALIGN
SIN	Y = SKIP IF NONE OR NOT APPLICABLE
ZERO FILL	Y = ENTER PRECEDING ZEROS OR ZERO FILL REMAINING DECIMAL PLACES
REG. CODE	1 = OPERATIONALLY REQUIRED 2 = PROGRAMMATICALLY REQUIRED 3 = OPERATIONALLY REQUIRED, CONDITIONALLY 4 = PROGRAMMATICALLY REQUIRED, CONDITIONALLY

(SEE CHAPTER III, "DATA BASE REGISTRATION REQUIREMENTS,” FOR FURTHEREXPLANATION)

GRANT	1 = GRANT ELIGIBLE 2 = GRANT WITHHOLDING 3 = CONDITIONALLY GRANT ELIGIBLE 4 = CONDITIONALLY GRANT WITHHOLDING
CBR	Y = CAN BE REMOVED (i.e., $ IN LEFT-MOST POSITION) N = CANNOT BE REMOVED

PUBLIC WATER SYSTEM
DATA CAPTURE FORMS A1 A2

PWS ID

STATE (C101) | ID NUMBER

ACTION CODE (I=INSERT M=MODIFY)

BATCH SEQUENCE NUMBER

A1 SYSTEM ADDRESS

SYSTEM NAME (C131)

RESPONSIBLE PARTY (C132)

ADDRESS LINE 1 (C133)

ADDRESS LINE 2 (C135)

CITY (C137)

STATE (C139) | COUNTRY CODE (C140) | ZIP CODE (C141) | +4 (C141) | INTERNATIONAL POSTAL CODE (C142) | TELEPHONE (C143)

A2 PUBLIC WATER SYSTEM CHARACTERISTICS

PWS TYPE (C105) — C=COMMUNITY N=NON-COMMUNITY P=NON-TRANSIENT NON-COMMUNITY

ACTIVITY FLAG (C107) — A=ACTIVE I=INACTIVE

DEACTIVATION DATE YR MO (C113)

RETAIL POPULATION SERVED (C117)

PERCENT SURFACE (C121) + PERCENT GROUND (C123) + PERCENT PURCHASED SURFACE (C125) + PERCENT PURCHASED GROUND (C127) =100%

AVG DAILY PROD (C149)

DESIGN CAPACITY (C151)

EMERGENCY PROD (C153)

STORAGE CAPACITY (C155)

OWNER TYPE (C163)

RETAIL SERVICE CONNECTIONS (C147)

NON-COMMUNITY SEASON BEGIN MO DAY (C159) END MO DAY (C161)

Exhibit 1. Data Capture Forms A1 A2

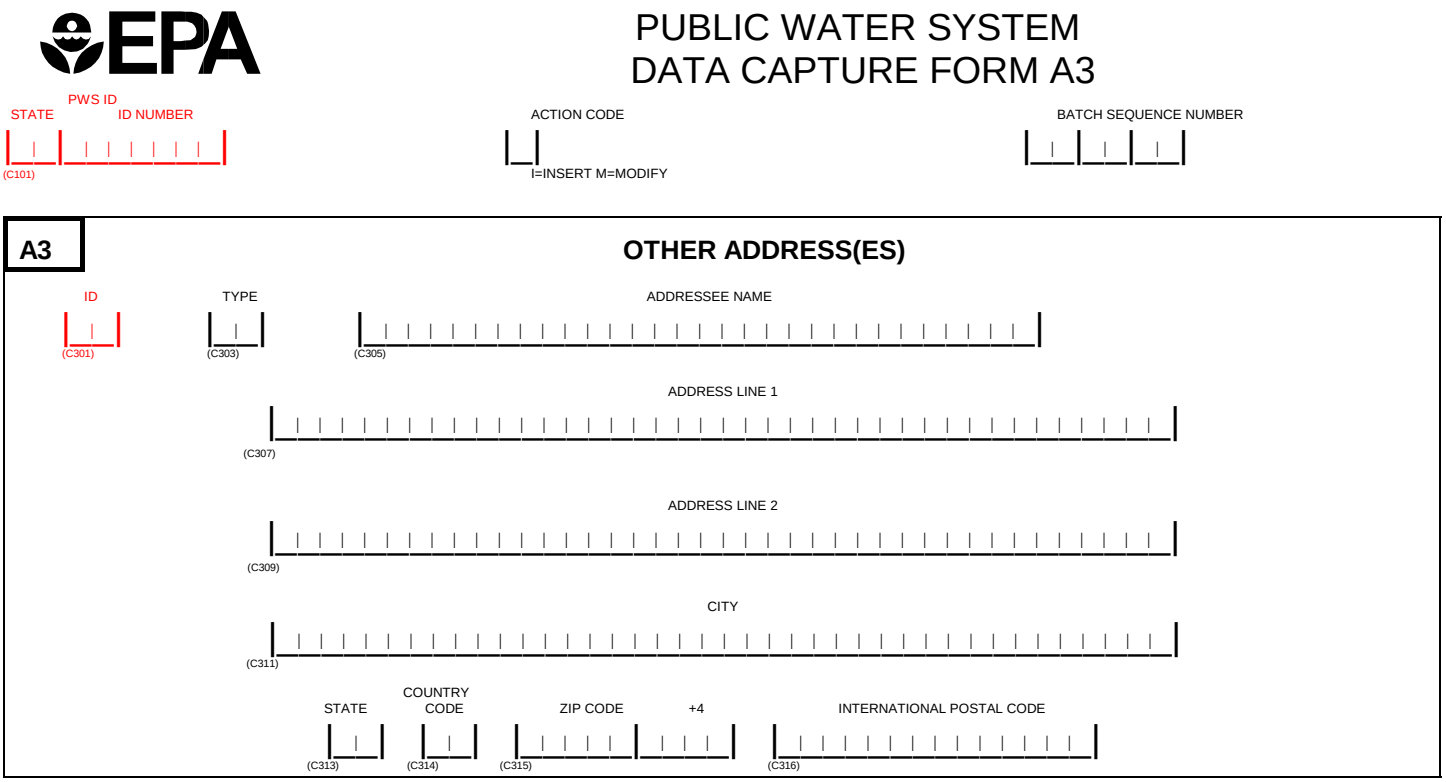

Exhibit 2. Data Capture Form A3

Data Capture Form B

SECTION B1 SOURCE / ENTITY DATA (See Exhibit 5)

This section is used to enter data characterizing a source of water is utilized by, or an entity related to, a PWS. An entity can be any location or facility related to the PWS. Such entities include distribution system entry points, treatment facilities, pumping facilities, water storage facilities, and the like. In order for the SDWIS/FED system to permit the addition of a new PWS, at least one source entity data record must be specified with C405 indicating a source of water. The following is entered via this section:

SE ID
(C401)

Enter a numeric value uniquely identifying a specific source of water utilized by, or an entity (e.g., entry point, treatment facility, reservoir, etc.) related to, a PWS.

See CHAPTER IV, "Record Identification and Maximum Occurrences" for user assignment and automatic generation of this ID. Also, see Appendix C, "Anytown USA, Public Water System," for examples of Source/Treatment relationships.

NAME
(C403)

Enter the name of the source of water or the name of an entity (e.g., name of treatment plant) related to a PWS.

SE RECORD TYPE
(C405)

Enter either a DTF FRDS code which identifies this record as a Source, an Entry Point, or a Plant; or enter a SDWIS/FED value which identifies the type of facility. Valid codes may be found in the *SDWIS/FED On-Line Data Dictionary*. See also Exhibit 4.

Exhibit 4 depicts valid combinations of C405 and C407 and the associated SDWIS Type Code for Facilities which are Source, Treatment Plants, and Entry Points. Valid combinations of C405 and C407 are converted to SDWIS Type Codes which are posted to the SDWIS/FED data base.

SE RECORD TYPE is used in conjunction with SE CODE and must be a valid combination thereof. In order for the SDWIS/FED system to permit the addition of a new PWS (i.e., data base registration), at least one Source Entity record must be specified with an SE RECORD TYPE of one of the following: S, CC, IG, IN, NP, RC, RS, SP, or WL.

SE CODE
(C407)

Enter either a DTF FRDS code which describes the type of Source, Entry Point, or Plant; or enter a SDWIS/FED code describing the type of water. Valid codes may be found in the *SDWIS/FED On-Line Data Dictionary.*

SE CODE is used in conjunction with SE RECORD TYPE and must be a valid combination thereof. See also Exhibit 4.

AVAILABILITY
(C409)

Enter the code value representing the circumstances under which a source of water utilized by, or an entity related to, a PWS is used or operated. Examples of valid codes may be found in the *SDWIS/FED On-Line Data Dictionary.*

SELLER PWS ID (STATE AND ID NUMBER)
(C411)

Enter the State-prefixed PWS ID of the PWS from which water is purchased. SELLER PWS ID is valid only for purchased sources of water.

NOTE: Seller Source ID Processing

The following applies to the situation where an invalid Seller ID is submitted for a "Purchased Source" which is the only source for a PWS:

The update program shall reject the entire source (form reject rather than transaction reject) when the Seller Source ID (C0411) is not found on the database for a Consecutive Connection or Non-Piped (purchased) source. If this results in the posting of a PWS without a source of water, such PWSs shall be reclassified as Non-Public (by updating the value of FED_TYPE_CODE to "NP"). The value of the STATE_TYPE_CODE shall remain as the user-supplied value. Should the water system eventually qualify again as a public water system (by providing a valid source of water), the value of STATE_TYPE_CODE shall be populated in the FED_TYPE_CODE field. Classification of a system as non-public shall also cause the primary source code to be valued at blank (and re-evaluated once the system becomes public again). Non-public water systems will not be included in Grant Eligibility Criteria.

MERIDIAN NAME
(C418)

Enter an alphanumeric value representing the name of a North-South line from which an exact measurement may be made in order to locate a specific Township. When coupled with the associated Baseline, it identifies the starting point from which Township, Range,

Section, Quarter-Section, and Quarter-Quarter Section may be used to pinpoint the location of a Source/Entity.

TOWNSHIP / RANGE
(C419, C421, C423, C425, C426)

Enter the TOWNSHIP/RANGE data for the location of the entity being reported. When TOWNSHIP/RANGE data is specified, the following rules apply:

TOWNSHIP/RANGE data is used to describe an area of land and is made up of five separate data elements. None of these five data elements is meaningful by itself, but when all are used, they will define an area of one sixteenth square mile (see Exhibit 3). The five data elements are described as follows:

TOWNSHIP (C419) - Positions 1 - 3 is a number representing the location of a TOWNSHIP in relationship to a known base line. Position 4 is the direction ("N" for North, or "S" for South) from a known base line. Rules for entering TOWNSHIP are as follows:

- Positions 1 - 3 must be numeric.
- Positions 1 - 3 must be greater than or equal to 001.
- Position 4 must be ...
  - "N" (i.e., the township is north of the base line). **OR**
  - "S" (i.e., the township is south of the base line).

RANGE (C421) - Positions 1 - 3 is a number representing the location of a RANGE in relationship to a known Principal Meridian. Position 4 is the direction ("E" for East or "W" for West) from a known Principal Meridian. The rules for entering RANGE are as follows:

- Positions 1 - 3 must be numeric.
- Positions 1 - 3 must be greater than or equal to 001.
- Position 4 must be ...
  "E" (i.e., the range is east of the Principal Meridian). **OR**
  "W" (i.e., the range is west of the Principal Meridian).

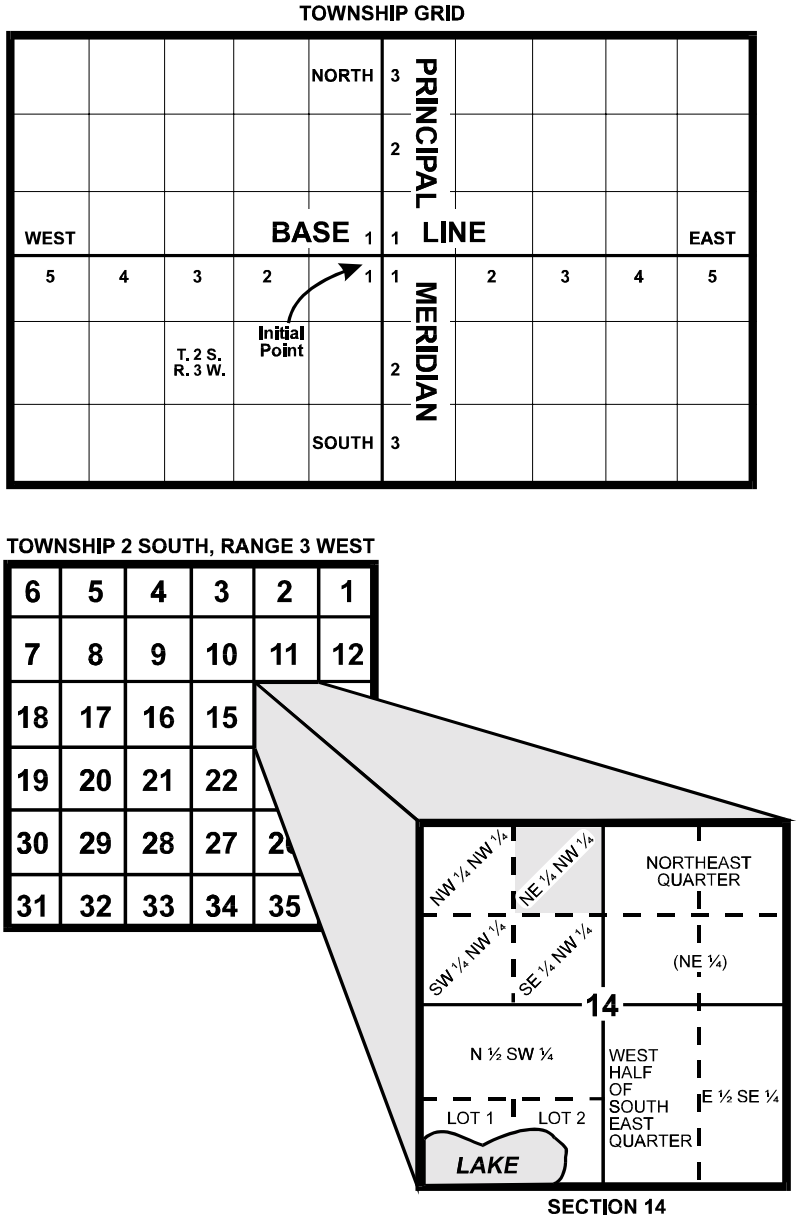

Exhibit 3. Township/Range

SECTION (C423) - This is a numeric value representing one of the 36 sections of a township. The 36 sections are numbered in a zigzag fashion, beginning with section 01 in the northeast corner of a township and ending with section 36 in the southeast corner of the township. SECTION must be entered under the following rules:

- Must be numeric.
- Must be greater than or equal to 01 and less than or equal to 36.

QUARTER SECTION (C425) - This is an alphabetic value representing a particular quadrant of a section. The four quadrants are identified as follows:

- "NW" (i.e., the northwest quadrant of the section).
- "NE" (i.e., the northeast quadrant of the section).
- "SW" (i.e., the southwest quadrant of the section).
- "SE" (i.e., the southeast quadrant of the section).

QUARTER QUARTER SECTION (C426) - This is an alphabetic value representing one of four quadrants of a particular quadrant of a section. The four quadrants are identified as follows:

- "NW" (i.e., the northwest quadrant of the quarter section).
- "NE" (i.e., the northeast quadrant of the quarter section).
- "SW" (i.e., the southwest quadrant of the quarter section).
- "SE" (i.e., the southeast quadrant of the quarter section).

- Township must ALWAYS be specified in conjunction with Range. Range must ALWAYS be specified in conjunction with Township.
- Section may only be specified when a Township and Range have been specified.
- Quarter section may only be specified when a Township, Range, and Section have been specified.

- Quarter-quarter section may only be specified when a Township, Range, Section, and Quarter Section have been specified.

When blanking out (initializing to a null value) TOWNSHIP/RANGE data the following rules apply:

- A dollar sign ($) in the left-most position of TOWNSHIP or RANGE will cause all TOWNSHIP/RANGE data to be blanked out.

- A dollar sign ($) in the left-most position of SECTION will cause SECTION, QUARTER SECTION, and QUARTER QUARTER SECTION to be blanked out.

- A dollar sign ($) in the left-most position of QUARTER SECTION will cause QUARTER SECTION and QUARTER QUARTER SECTION to be blanked out.

RIVER REACH
(C427)

Enter the value identifying the hydrologic unit code and, if appropriate, the segment number for the location of the source or entity being reported.

ON REACH
(C429)

Enter the value representing whether a source of water is “on” or “off” a defined river reach. If the source of water is on a defined river reach enter a “Y.” If the source of water is off a defined river reach, enter an “N.” ON REACH should be specified when RIVER REACH or REACH MILES has been specified.

REACH MILES
(C431)

Enter the decimal value defining an exact location in miles, of a surface source intake in relationship to the downstream end of the river reach, if the source is “on” a defined river reach.

- The integer portion cannot exceed 4 positions.

- The decimal portion cannot exceed 2 positions.

- Must be numeric.

- Must be greater than or equal to zero.

SOURCE TREATMENT CODE

(C433)

Enter “N” to specify that a source facility is not treating their water. Leave the field blank if the facility is not a source. This results in the update of SRC_TRT_CD to “N” in the water system facility table. SRC_TRT_CD defaults to “U” if the facility is a source.

SELLER SOURCE TREATMENT CODE

(C435)

Enter the alpha code representing seller source treatment for purchased sources, indicating whether or not the seller of a purchased source is treating the source. Leave the field blank if the facility is not a purchased source.

- Y = Treated.
- N = Not treated.
- F = Filtered

This results in the update of SELLER_SRC_TRT_CD to either “Y,” “N,” or “F”in the water system facility table. If the facility is a purchased source, SELLER_SRC_TRT_CD otherwise defaults to “U.”

Sources

FRDS Codes C405	FRDS Codes C407	SDWIS Type Code
S	P	CC
S	W	CC
S	Z	CC
S	S	IN
S	G	WL
S	Y	WL

SDWIS Codes C405	SDWIS Codes C407	SDWIS Type Code
CC	GU, GW, SW	CC
IG	GU, SW	IG
IN	SW	IN
NP	GU, GW, SW	NP
RC	GW	RC
RS	SW	RS
SP	GU, GW, SW	SP
WL	GU, GW	WL

Note: There are no C05/C407 combinations of FRDS Codes for SDWIS Type Codes: IG, NP, SP, RC, and RS.

Plants

FRDS Codes C405	FRDS Codes C407	SDWIS Type Code
P	O	OT
P	M	PF
P	R	ST
P	T	TP*
P	H	WH

SDWIS Codes C405	SDWIS Codes C407	SDWIS Type Code
CS	blank	CS
CH	blank	CH
CW	blank	CW
DS	blank	DS
PC	blank	PC
SI	blank	SI
TM	blank	TM
OT	blank	OT
PF	blank	PF
ST	blank	ST
TP	blank	TP*
WH	blank	WH

* SDWIS Type Code = TP (i.e., treatment plant) denotes the only Plant Facility which can have treatment data associated/reported with it.

Entry Points

FRDS Codes C405	FRDS Codes C407	SDWIS Type Code
E	blank	SS
E	blank	SS
E	blank	SS
E	blank	SS

SDWIS Codes C405	SDWIS Codes C407	SDWIS Type Code
SS	blank	SS

Note: Per TOPO, Entry Points cannot have a C407.

Note that both FRDS values (i.e., one-character values shown above) and SDWIS values (i.e., two-character values shown above can be entered in C405 and C407. If a FRDS value is entered in C405, then a FRDS value must be entered in C407. If a SDWIS value is entered in C405, then a SDWIS value must be entered in C407.

Exhibit 4. Valid SE Record Type (C405) and SE Code (C407) Combinations
SECTION B1 - SOURCE / ENTITY DATA

DATA ELEMENT REGISTRATION TABLE

DATA ELEMENT NUM.	FORM REFERENCE NAME	A/N/D	JUST	SIN	ZERO FILL	REG. CODE	GRANT	CBR
C401	SE ID	N	L			1		N
C403	NAME	A	L					Y
C405	SE RECORD TYPE	A	N/A			1		N
C407	SE CODE	A	N/A			2		N
C409	AVAILABILITY	A	N/A					Y
C411	SELLER PWS ID	A	L			4		Y
C418	MERIDIAN NAME	A	L	Y		4		Y
C419	TOWNSHIP	A	L	Y	Y	4		Y
C421	RANGE	A	L	Y	Y	4		Y
C423	SECTION	N	L	Y	Y	4		Y
C425	1/4 SECTION	A	L	Y		4		Y
C426	1/4 - 1/4 SECTION	A	L	Y				Y
C427	RIVER REACH	A	L	Y	Y			Y
C429	ON REACH	A	N/A	Y				
C431	REACH MILES	A		Y				Y
C433	SOURCE TREATMENT CODE	A	L	Y			4	N
C435	SELLER SOURCE TREATMENT CODE	A	L	Y			4	N

LEGEND:

A/N/D	A = ALPHANUMERIC, N = NUMERIC, D = DECIMAL
JUST	L = LEFT JUSTIFY, R = RIGHT JUSTIFY, A = ALIGN
SIN	Y = SKIP IF NONE OR NOT APPLICABLE
ZERO FILL	Y = ENTER PRECEDING ZEROS OR ZERO FILL REMAINING DECIMAL PLACES
REG. CODE	1 = OPERATIONALLY REQUIRED 2 = PROGRAMMATICALLY REQUIRED 3 = OPERATIONALLY REQUIRED, CONDITIONALLY 4 = PROGRAMMATICALLY REQUIRED, CONDITIONALLY

(SEE CHAPTER III, "DATA BASE REGISTRATION REQUIREMENTS," FOR FURTHER EXPLANATION)

GRANT	1 = GRANT ELIGIBLE 2 = GRANT WITHHOLDING 3 = CONDITIONALLY GRANT ELIGIBLE 4 = CONDITIONALLY GRANT WITHHOLDING
CBR	Y = CAN BE REMOVED (i.e., $ IN LEFT-MOST POSITION)

N = CANNOT BE REMOVED

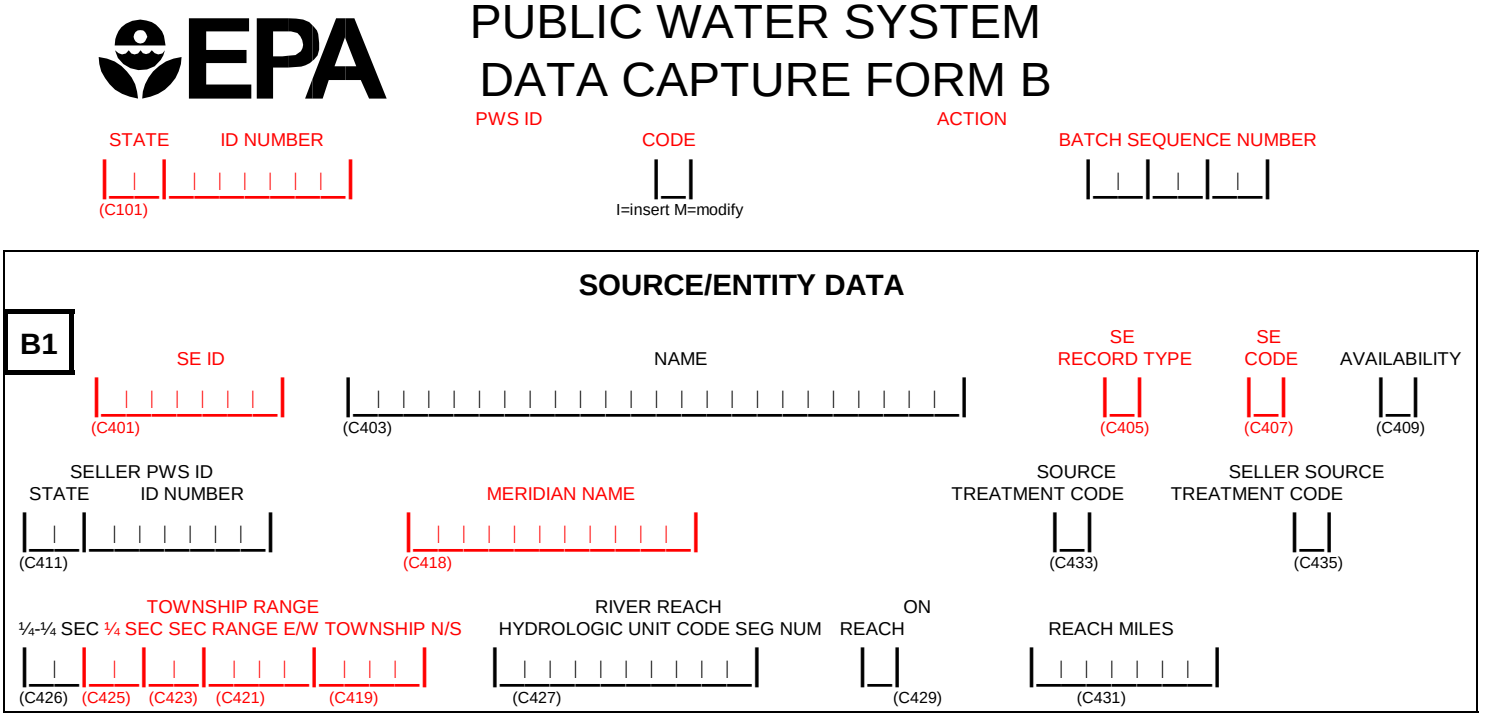

Exhibit 5. Data Capture Form B1

SECTION B1(2) LOCATIONAL DATA (see Exhibit 6)

This section is used to enter data identifying the geographic location of a PWS or facility. A complete treatment record must include both Latitude and Longitude in either Degrees, Minutes, and Seconds or in Decimal Degrees. The following is entered via this section:

SE ID
(C401)

Enter a numeric value uniquely identifying a specific source of water that is utilized by, or an entity (e.g., entry point, treatment facility, reservoir, etc.) related to, a PWS.

See CHAPTER IV, "Record Identification and Maximum Occurrences" for user assignment and automatic generation of this ID. Also, see Appendix C, "Anytown USA, Public Water System," for examples of Source/Treatment relationships.

LATITUDE
±(DEGS:MINS:SECS)
(C415)

Enter an equatorial sign of "+" or "-." If left blank, the sign defaults to "+."

Enter the degrees, minutes, and seconds of LATITUDE for the location of the entity being reported.

LATITUDE is required if LONGITUDE is specified. If LATITUDE is reported in degrees, minutes, and seconds, LONGITUDE must be reported in the same format.

Blanking out (initializing to a null value) LATITUDE by using a dollar sign ($) in the left-most position will also blank out LONGITUDE and all mandatory and optional MAD codes (C445 - C463).

Note: when the user inserts or modifies Latitude in Degrees, Minutes, and Seconds for American Samoa (AS), the equatorial sign will be set to "-," regardless of whether the users entered a "+" or a "-" in the equatorial sign field. There is no error message informing the user that "+" is incorrect and the value was changed by the system to "-."

Note: When the user inserts or modifies Latitude in Degrees, Minutes, and Seconds for the U.S. Minor Outlying Islands (UM), the user should set the equatorial sign to "+" or "-."

LONGITUDE
±(DEGS:MINS:SECS)
(C417)

Enter a meridian sign of "+" or "-." If left blank, the sign defaults to "-."

Enter the degrees, minutes, and seconds of LONGITUDE for the location of the entity being reported.

LONGITUDE is required if LATITUDE is specified. If LONGITUDE is reported in degrees, minutes, and seconds, LATITUDE must be reported in the same format.

Blanking out (initializing to a null value) LONGITUDE by using a dollar sign ($) in the left-most position will also blank out LATITUDE and all mandatory and optional MAD codes (C445 - C463).

Note: When the user inserts or modifies Longitude in Degrees, Minutes, and Seconds, for U.S. Minor Outlying Islands (UM), the user must set the meridian sign to "+" or "-".

Note: When the user inserts or modifies Longitude in Degrees, Minutes, and Seconds for Alaska (AK), the user must set the meridian sign to "+," "-," in order to accommodate the Aleutian Islands.

Note: When the user inserts or modifies Longitude in Degrees, Minutes, and Seconds for Guam (GU), Palau (PW), Federated States of Micronesia (FM), Northern Mariana Islands (MP), or Marshall Islands (MH), the meridian sign is set to "+." For all other areas, the meridian sign is set to "-."

OR

LATITUDE
±(DECIMAL DEGREES)
(C441)

Enter the LATITUDE, in decimal degrees, for the location of the entity being reported.

Enter an equatorial sign of "+" or "-." If left blank, the sign defaults to "+."

LATITUDE is required if LONGITUDE is specified. If LATITUDE is reported in decimal degrees, LONGITUDE must be reported in the same format.

Blanking out (initializing to a null value) LATITUDE by using a dollar sign ($) in the left-most position will also blank out LONGITUDE and all mandatory and optional MAD codes (C445 - C463).

Note: When the user inserts or modifies Latitude Decimal Degrees for American Samoa (AS), equatorial sign will be set to "-" regardless of whether the user entered a "+" or a "-" in the equatorial sign field. There is no error message informing the user that "+" is incorrect and the value was changed by the system to "-."

Note: When the user inserts or modifies Latitude in Decimal Degrees for U.S. Minor Outlying Islands (UM), the user must set the equatorial sign to "+,"or "-."

LONGITUDE
±(DECIMAL DEGREES)
(C443)

Enter the LONGITUDE, in decimal degrees, for the location of the entity being reported.

Enter a meridian sign of "+" or "-." If left blank, the sign defaults to "-."

LONGITUDE is required if LATITUDE is specified. If LONGITUDE is reported in decimal degrees, LATITUDE must be reported in the same format.

Blanking out (initializing to a null value) LONGITUDE by using a dollar sign ($) in the left-most position will also blank out LATITUDE.

Note: When the user inserts or modifies Longitude in Decimal Degrees for U.S. Minor Outlying Islands (UM), the user must set the meridian sign to "+" or "-".

Note: When the user inserts or modifies Longitude in Decimal Degrees for Alaska (AK), the user must set the meridian sign to "+," "-," in order to accommodate the Aleutian Islands.

Note: When the user inserts or modifies Longitude in Decimal Degrees for Guam (GU), Palau (PW), Federated States of Micronesia (FM), Northern Mariana Islands (MP), or Marshall Islands (MH), the meridian sign is set to "+." For all other areas, the meridian sign is set to "-."

Note: Latitude and Longitude should be reported in either the Degrees, Minutes, and Seconds format (C415 and C417) or the Decimal Degrees format (C441 and C443). The system will automatically convert the reported format to the other, unreported format and populate the data base with both values. In order to ensure consistency between formats, if both formats are reported, the system will ignore the Degrees, Minutes, and Seconds format and use the Decimal Degrees format to populate both sets of values.

Refer to Appendix B for Latitude/Longitude conversion formulae.

LATITUDE/LONGITUDE METHOD OF COLLECTION
(C445)

Enter the code value representing the method used to determine the Latitude and Longitude coordinates of the water system facility. Refer to *Appendix D, Reporting Locational Data to the Safe Drinking Water Information System (SDWIS/FED)* (SDC-0055-0082-BK-7034 issued June 30, 1998) of *Revised Inventory Reporting Requirements for the Safe Drinking Water Information System (SDWIS/FED) Technical Guidance* (EPA 816/R-98-007 issued June 1998) (a.k.a. the Guidance Document) for a list of collection method codes.

LATITUDE/LONGITUDE ACCURACY
(C447)

Enter the value of the measurement of the amount of deviation from true value in a measurement for Latitude or Longitude (i.e., measurement of error).

LATITUDE/LONGITUDE DESCRIPTION CATEGORY
(C449)

Enter the code value describing the feature referenced by the Latitude and Longitude coordinates or the water system facility. Refer to Appendix D, Reporting Locational Data to the Safe Drinking Water Information System (SDWIS/FED) of the Guidance Document for a list of description category codes.

LATITUDE/LONGITUDE HORIZONTAL DATUM
(C451)

Enter the code value representing the horizontal control datum for the Latitude and Longitude coordinates of the water system facility. Refer to Appendix D, Reporting Locational Data to the Safe Drinking Water Information System (SDWIS/FED) of the Guidance Document for a list of permitted code values.

LATITUDE/LONGITUDE SOURCE SCALE
(C453)

Enter the code value representing the scale of map used to determine the Latitude and Longitude coordinates of the water system facility. Refer to Appendix D, Reporting Locational Data to the Safe Drinking Water Information System (SDWIS/FED) of the Guidance Document for a list of permitted code values.

LATITUDE/LONGITUDE POINT-LINE-AREA
(C455)

This is a code value indicating whether the Latitude and Longitude coordinates of the water system facility represent a point, multiple points on a line, or an area. Refer to Appendix D, Reporting Locational Data to the Safe Drinking Water Information System (SDWIS/FED) of the Guidance Document for a list of permitted code values. This value defaults to "1" if not entered by the user.

Note: If any of the MAD codes (C445 - C455) are entered, all must be entered.

Note: If any of the MAD codes (C445 - C455) are entered, then Latitude and Longitude must be entered.

Note: If C105 = "C" and the current date is after December 31, 1999 (1999/12/31) or if C105 = NTNC and the current date is after December 31, 2004, then the MAD codes (C445 - C455) are required.

LATITUDE/LONGITUDE DATE OF COLLECTION
(C457)

Enter the date when the Latitude and Longitude coordinates of the water system facility were determined. Refer to Appendix D, Reporting Locational Data to the Safe Drinking Water Information System (SDWIS/FED) of the Guidance Document for a list of permitted values.

LATITUDE/LONGITUDE SOURCE
(C459)

This is a code value describing the party responsible for collecting, or otherwise providing, the Latitude and Longitude coordinates of the water system facility. Refer to Appendix D, Reporting Locational Data to the Safe Drinking Water Information System (SDWIS/FED) of the Guidance Document for a list of permitted values.

LOCATION DESCRIPTION COMMENTS
(C461)

This is a text field relating to the location or Vertical Measure of the water system facility. It may also be used to store additional information on the collection or post processing of the data. It may also be used to give greater detail on the location or feature of the of the water system facility.

The Comment is reported in positions 3-40 of the C461 DTF data value. Up to four successive C461 DTF transactions may be used to report the entire 150 character Comment.

Positions 1-2 of the DTF data value must contain a sequence number to place the various Comment transactions in the correct order. The first transaction must contain "01" in positions 1-2. "02," "03," and "04" may also be used. No other numbers may be provided and all Comment transactions will reject if any sequence numbers are skipped.

The first three transactions may contain up to 38 characters of Comment text in positions 3-40 of the data value portion of DTF (positions 32-71 of the transaction). The fourth transactions, if needed, may contain up to 36 characters of text in positions 3-38, for a total of 150 characters.

LATITUDE/LONGITUDE VERIFICATION
(C463)

This is a code value indicating the process by which the Latitude and Longitude coordinates of the water system facility have been verified by EPA, grantees, or contractors. Refer to Appendix D, Reporting Locational Data to the Safe Drinking Water Information System (SDWIS/FED) of the Guidance Document for a list of permitted values.

Note: If any optional MAD codes (C457 - C463) are entered, then the Latitude and Longitude must be entered.

VERTICAL MEASURE
(C465)

Enter the vertical distance, in meters, from the Vertical Datum to the land surface or other measuring point. Refer to Appendix D, Reporting Locational Data to the Safe Drinking Water Information System (SDWIS/FED) of the Guidance Document for examples and permitted values.

VERTICAL MEASURE METHOD OF COLLECTION
(C467)

This is a code value representing the method used to determine the Vertical Measure of the water system facility. Refer to Appendix D, Reporting Locational Data to the Safe Drinking Water Information System (SDWIS/FED) of the Guidance Document for a list of permitted code values.

VERTICAL MEASURE ACCURACY
(C469)

This is the quantitative measurement of the amount of deviation from true value in the Vertical Measure (estimate of error). This value describes the correctness, in meters, of the Vertical Measure.

VERTICAL DATUM
(C471)

This is a code value representing the vertical control datum for the Vertical Measure of the water system facility.

SECTION B1(2) - LOCATIONAL DATA
DATA ELEMENT REGISTRATION TABLE

DATA ELEMENT NUM.	FORM REFERENCE NAME	A/N/D	JUST	SIN	ZERO FILL	REG. CODE	GRANT	CBR
C401	SE ID	N	L			1		N
C415	LATITUDE ±(DEG:MINS:SECS)	N	R	Y			4	Y
C417	LONGITUDE ±(DEG:MINS:SECS)	N	R	Y			4	Y
C441	LATITUDE ±(DECIMAL DEGREES)	D	A	Y			4	Y
C443	LONGITUDE ±(DECIMAL DEGREES)	D	A	Y			4	Y
C445	LAT/LONG.METH.COLL.	A	L				4	N
C447	LAT/LONG.ACCURACY	D	A	Y			4	N
C449	LAT/LONG.DESC.CAT	A	L				4	N
C451	LAT/LONG.HORIZ.DATUM	A	L				4	N
C453	LAT/LONG.SOURCE SCALE	A	L				4	N
C455	LAT/LONG.PNT-LN-AREA	A	L				4	N
C457	LAT/LONG.DATE OF COLL	A	L					Y
C459	LAT/LONG.SRC.CODE	A	L					Y
C461	LOC.DESC.COMMENTS	A	L					Y
C463	LAT/LONG.VERIFIC.	A	L					Y
C465	VERT.MEASURE	D	A	Y				Y
C467	VERT.MEASURE METH. COLL	A	L					Y
C469	VERT.MEAS.ACCURACY	D	A	Y				Y
C471	VERT.DATUM	A	L					Y

LEGEND:

A/N/D	A =	ALPHANUMERIC, N=NUMERIC, D=DECIMAL
JUST	L =	LEFT JUSTIFY, R=RIGHT JUSTIFY, A=ALIGN
SIN	Y =	SKIP IF NONE OR NOT APPLICABLE
ZERO FILL	Y =	ENTER PRECEDING ZEROS OR ZERO FILL REMAINING DECIMAL PLACES
REG. CODE	1 =	OPERATIONALLY REQUIRED
	2 =	PROGRAMMATICALLY REQUIRED
	3 =	OPERATIONALLY REQUIRED, CONDITIONALLY
	4 =	PROGRAMMATICALLY REQUIRED, CONDITIONALLY

(SEE CHAPTER III, "DATA BASE REGISTRATION REQUIREMENTS," FOR FURTHER EXPLANATION)

GRANT	1 =	GRANT ELIGIBLE
	2 =	GRANT WITHHOLDING
	3 =	CONDITIONALLY GRANT ELIGIBLE

	4 =	CONDITIONALLY GRANT WITHHOLDING
CBR	Y =	CAN BE REMOVED (i.e., $ IN LEFT-MOST POSITION)
	N =	CANNOT BE REMOVED

PUBLIC WATER SYSTEM DATA CAPTURE FORM B

PWS ID
STATE ID NUMBER
(C101)

ACTION CODE
I=Insert M=Modify

BATCH SEQUENCE NUMBER

LOCATIONAL DATA

B1(2)

SE ID
(C401)

DEGS:MINS:SECS
LATITUDE ± (C415)
LONGITUDE ± (C417)

DECIMAL DEGREES
OR LATITUDE ± (C441)
OR
LONGITUDE ± (C443)

MANDATORY MAD FIELDS
COLLECTION MODE
(C445)
ACCURACY MEASUREMENT
(C447)
DESCRIPTION CATEGORY
(C449)
HORIZONTAL DATUM
(C451)
SOURCE SCALE
(C453)
POINT-LINE-AREA
(C455)

OPTIONAL MAD FIELDS
COLLECTION DATE
(C457)
SOURCE CODE
(C459)
VERIFICATION CODE
(C463)

VERTICAL MEASUREMENT
MEASURE ± (C465)
COLLECTION METHOD
(C467)
ACCURACY MEASUREMENT
(C469)
DATUM CODE
(C471)

LOCATION DESCRIPTION COMMENT TEXT
(C461)

Exhibit 6. Data Capture Form B1(2)

SECTION B2 TREATMENT DATA (See Exhibit 7)

This section should be used to enter data identifying treatment objectives and processes applied to a unique source of water used by a PWS. A complete treatment record consists of the TREATMENT OBJECTIVE and the TREATMENT PROCESS. The following is entered via this section:

See CHAPTER IV, "Record Identification and Maximum Occurrences" for user assignment and automatic generation of this ID. See Appendix C, "Anytown USA, Public Water System," for examples of Source/Treatment relationships.

SE ID
(C401)

Enter the SE ID identifying the source of water to which this treatment data is to be applied. In order to be registered into the SDWIS/FED system every source must have a treatment objective and treatment process specified.

TREATMENT ID
(C481)

Enter a numeric value that will uniquely identify each specific treatment record reported for a source of water.

TREATMENT OBJECTIVE
(C483)

Enter the code value identifying the objective to be attained through treatment of a source of water. The code value specified must be a valid treatment objective code as found in the *SDWIS/FED On-Line Data Dictionary*.

TREATMENT OBJECTIVE is used in conjunction with TREATMENT PROCESS and must be a valid combination thereof. Valid combinations may be found in the SDWIS/FED TINVTOPA Code Table.

TREATMENT PROCESS
(C485)

Enter the code value identifying the treatment process to be applied to a source of water. The code value specified must be a valid treatment process code.

TREATMENT PROCESS is used in conjunction with TREATMENT OBJECTIVE and must be a valid combination thereof. Valid combinations may be found in the SDWIS/FED TINVTOPA Code Table.

INNOVATIVE TREATMENT INDICATOR
(C487)

Enter the alpha code value identifying whether a submitted treatment objective and process is innovative or not innovative, but valid and EPA-approved.

- Y = Innovative.
- N = Not innovative, but approved.

INNOVATIVE TREATMENT COMMENT
(C489)

This is a text field describing an innovative treatment or process.

SECTION B2 - TREATMENT DATA
DATA ELEMENT REGISTRATION TABLE

DATA ELEMENT NUM.	FORM REFERENCE NAME	A/N/D	JUST	SIN	ZERO FILL	REG. CODE	GRANT	CBR
C401	SE ID	N	L			1		N
C481	TREATMENT ID	N	L			3		N
C483	TREATMENT OBJECTIVE	A	N/A			3		Y
C485	TREATMENT PROCESS	N	L			3		Y
C487	INNOVATIVE TREATMENT INDICATOR	A	L	Y		4		N
C489	INNOVATIVE TREATMENT COMMENT	A	L	Y				Y

LEGEND:

A/N/D	A =	ALPHANUMERIC, N=NUMERIC, D=DECIMAL
JUST	L =	LEFT JUSTIFY, R=RIGHT JUSTIFY, A=ALIGN
SIN	Y =	SKIP IF NONE OR NOT APPLICABLE
ZERO FILL	Y =	ENTER PRECEDING ZEROS OR ZERO FILL REMAINING DECIMAL PLACES
REG. CODE	1 =	OPERATIONALLY REQUIRED
	2 =	PROGRAMMATICALLY REQUIRED
	3 =	OPERATIONALLY REQUIRED, CONDITIONALLY
	4 =	PROGRAMMATICALLY REQUIRED, CONDITIONALLY

(SEE CHAPTER III, "DATA BASE REGISTRATION REQUIREMENTS," FOR FURTHER EXPLANATION)

GRANT	1 =	GRANT ELIGIBLE
	2 =	GRANT WITHHOLDING
	3 =	CONDITIONALLY GRANT ELIGIBLE
	4 =	CONDITIONALLY GRANT WITHHOLDING
CBR	Y =	CAN BE REMOVED (i.e., $ IN LEFT-MOST POSITION)
	N =	CANNOT BE REMOVED

Public Water System
Data Capture Form B2

PWS ID
STATE ID NUMBER
(C101)

ACTION CODE
I =INSERT M=MODIFY

BATCH SEQUENCE NUMBER

B2 **TREATMENT DATA**

SE ID	TREATMENT ID	TREATMENT OBJECTIVE	TREATMENT PROCESS	INNOVATIVE TREATMENT INDICATOR	INNOVATIVE TREATMENT COMMENT
(C401)	(C481)	(C483)	(C485)	(C487)	(C489)

Exhibit 7. Data Capture Form B2

SECTION B3 TREATMENT FLOW DATA (See Exhibit 8)

This section is used to enter data linking two Water System Facilities. Using this section, the flow of water from one facility to the next can be mapped.

SE ID
(C401)

Enter the SE ID identifying the Water System Facility from which the water flows. A complete flow record will include the destination Water System Facility SE ID as well.

SE ID 2
(A5000)

Enter the SE ID identifying the Water System Facility that is the destination for the water flowing from the facility identified in C401 (above).

Note: GGCs are not valid for either C401 or A5000.

SECTION B3 - FACILITY FLOW DATA
DATA ELEMENT REGISTRATION TABLE

DATA ELEMENT NUM.	FORM REFERENCE NAME	A/N/D	JUST	SIN	ZERO FILL	REG. CODE	GRANT	CBR
C401	SE ID	A	L			1		
A5000	SE ID	A	L					

LEGEND:

A/N/D	A =	ALPHANUMERIC, N=NUMERIC, D=DECIMAL
JUST	L =	LEFT JUSTIFY, R=RIGHT JUSTIFY, A=ALIGN
SIN	Y =	SKIP IF NONE OR NOT APPLICABLE
ZERO FILL	Y =	ENTER PRECEDING ZEROS OR ZERO FILL REMAINING DECIMAL PLACES
REG. CODE	1 =	OPERATIONALLY REQUIRED
	2 =	PROGRAMMATICALLY REQUIRED
	3 =	OPERATIONALLY REQUIRED, CONDITIONALLY
	4 =	PROGRAMMATICALLY REQUIRED, CONDITIONALLY

(SEE CHAPTER III, "DATA BASE REGISTRATION REQUIREMENTS," FOR FURTHER EXPLANATION)

GRANT	1 =	GRANT ELIGIBLE
	2 =	GRANT WITHHOLDING
	3 =	CONDITIONALLY GRANT ELIGIBLE
	4 =	CONDITIONALLY GRANT WITHHOLDING
CBR	Y =	CAN BE REMOVED (i.e., $ IN LEFT-MOST POSITION)
	N =	CANNOT BE REMOVED

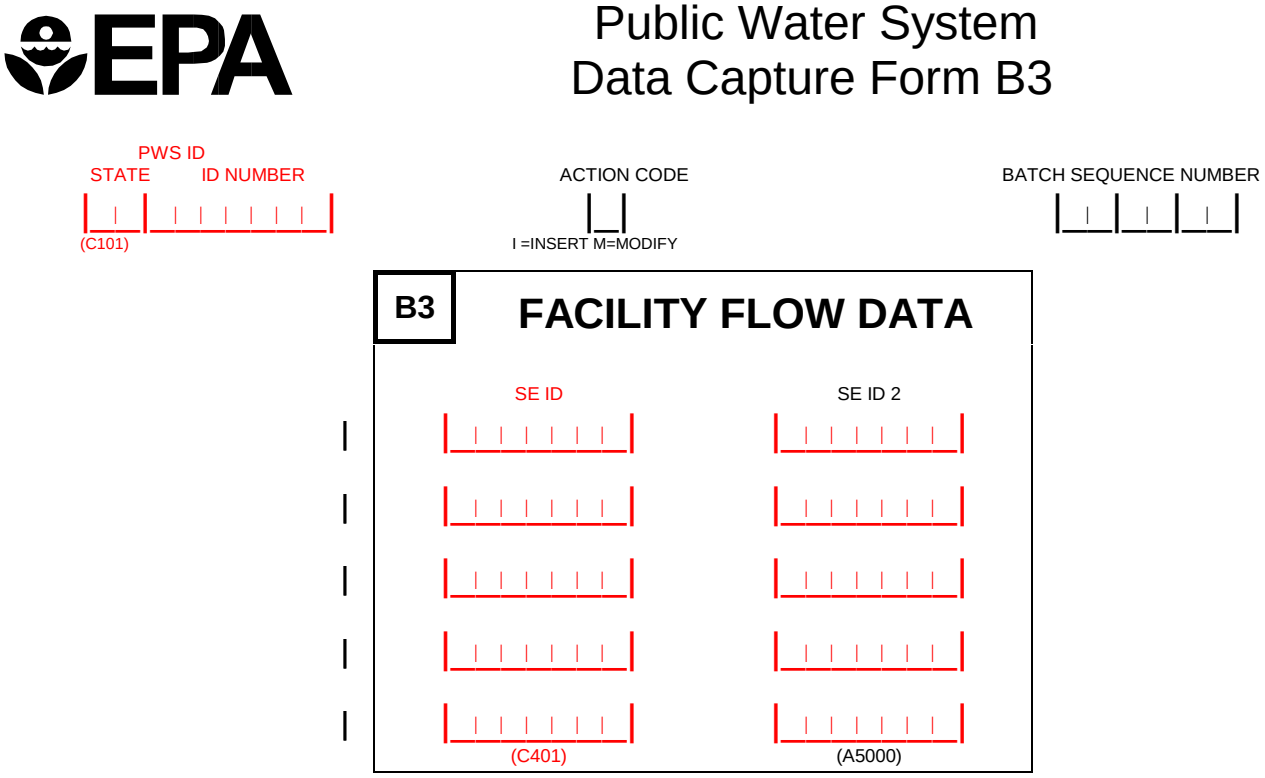

Exhibit 8. Data Capture Form B3

SECTION B4 TREATMENT PLANT ADDRESS DATA (See Exhibit 9)

This section is used to enter data characterizing the physical address of a treatment plant. Address Line 1 or Address Line 2, City, State, and Zip (i.e., C356 or C357, C358, C359 and C360) are considered *core* DTF data elements in reporting the physical address of a treatment plant and are mutually required (i.e., if one is present, then all must be present in the DTF). The treatment plant address data are stored in the TINLGENT table of the SDWIS/FED Data Base.

The following is entered via this section:

SE ID
(C401)

Enter the SE ID identifying the source of water to which this treatment data is to be applied.

TREATMENT PLANT NAME
(C355)

Enter the name of a treatment plant. Any combination of alphabetic, numeric, or special characters is allowed.

ADDRESS LINE 1
(C356)

Enter the first line of an address applicable to a PWS addressee or facility. This can be an additional address line applicable to the location of a PWS addressee or facility.

ADDRESS LINE 2
(C357)

Enter the second line of an address applicable to a treatment plant.

CITY
(C358)

Enter the city in which a treatment plant is located.

STATE
(C359)

Enter the USPS State abbreviation in which a treatment plant is located.

ZIP CODE + 4
(C360)

Enter the USPS ZIP CODE + 4 in which a treatment plant is located. If the + 4 portion of the ZIP CODE + 4 is unknown, leave that portion blank.

Note: Do not include a ZIP code if the country code is valued (i.e., non-US)

COUNTRY CODE
(C361)

Enter the country code applicable to the primary facility location of the PWS.

Note: Default code is US (United States). If the country code is CA (Canada), you must provide a valid Province code (State Code).

INTERNATIONAL POSTAL CODE
(C362)

Enter the International Postal Code applicable to the primary facility location of the PWS.

Note: This is an optional field; do not include a International Postal Code if the country code is US or blank (i.e., default).

SECTION B4 - TREATMENT PLANT ADDRESS DATA
DATA ELEMENT REGISTRATION TABLE

DATA ELEMENT NUM.	FORM REFERENCE NAME	A/N/D	JUST	SIN	ZERO FILL	REG. CODE	GRANT	CBR
C401	SE ID	N	L			1		N
C355	TREATMENT PLANT NAME	A	L	Y				Y
C356	TREATMENT PLANT ADDRESS 1	A	L			4	4	Y
C357	TREATMENT PLANT ADDRESS 2	A	L	Y		4	4	Y
C358	TREATMENT PLANT CITY	A	L			4	4	Y
C359	TREATMENT PLANT STATE	A	L			4	4	Y
C360	TREATMENT PLANT ADDRESS ZIP+4	N	L			4	4	Y
C361	COUNTRY CODE	A	L			4		Y
C362	INTERNATIONAL POSTAL CODE	A	L					Y

LEGEND:

A/N/D	A =	ALPHANUMERIC, N=NUMERIC, D=DECIMAL
JUST	L =	LEFT JUSTIFY, R=RIGHT JUSTIFY, A=ALIGN
SIN	Y =	SKIP IF NONE OR NOT APPLICABLE
ZERO FILL	Y =	ENTER PRECEDING ZEROS OR ZERO FILL REMAINING DECIMAL PLACES
REG. CODE	1 =	OPERATIONALLY REQUIRED
	2 =	PROGRAMMATICALLY REQUIRED
	3 =	OPERATIONALLY REQUIRED, CONDITIONALLY
	4 =	PROGRAMMATICALLY REQUIRED, CONDITIONALLY

(SEE CHAPTER III, "DATA BASE REGISTRATION REQUIREMENTS," FOR FURTHER EXPLANATION)

GRANT	1 =	GRANT ELIGIBLE
	2 =	GRANT WITHHOLDING
	3 =	CONDITIONALLY GRANT ELIGIBLE
	4 =	CONDITIONALLY GRANT WITHHOLDING
CBR	Y =	CAN BE REMOVED (i.e., $ IN LEFT-MOST POSITION)
	N =	CANNOT BE REMOVED

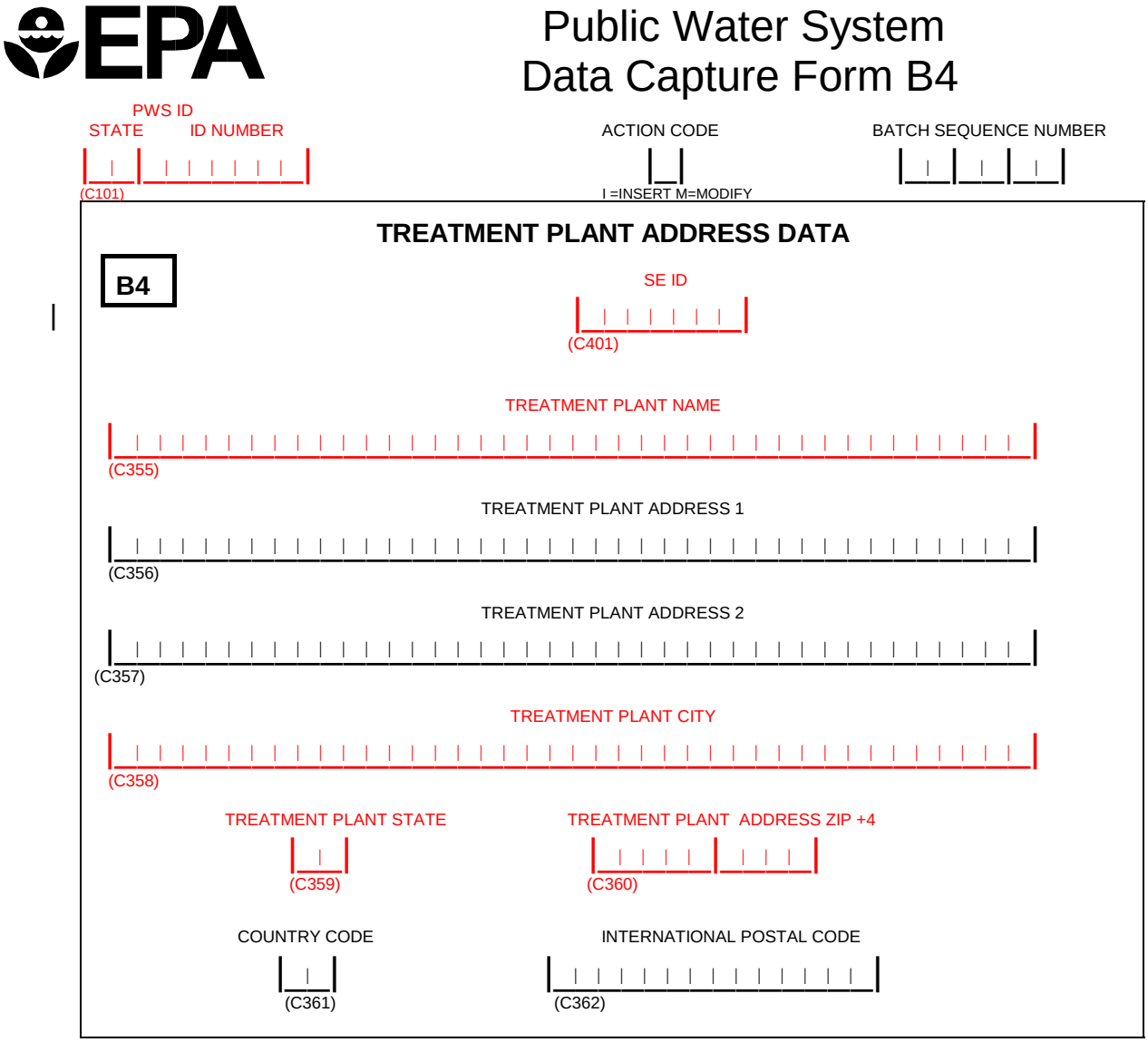

Exhibit 9. Data Capture Form B4

Data Capture Form C

SECTION C1 GEOGRAPHIC AREAS SERVED (See Exhibit 10)

This section is used to enter data identifying geographic areas or jurisdictions served by a PWS. All data elements within a single geographic areas served record should be valued with related data elements, which describe a single geographic area. For example, if city "X" is in county "A," they both should be specified in the same geographic areas served record. Conversely, if city "X" is outside of county "A," they each should be specified in a separate record. The SDWIS/FED data base has one geographic areas served record for each geographic area served reported to EPA. The following is entered via this section:

GA ID
(C501)

Enter a GA ID uniquely identifying a specific geographic area served.

See CHAPTER IV, "Record Identification and Maximum Occurrences" for user assignment and automatic generation of this ID.

ADMIN REGION
(C503)

Enter the code value representing the state administrative region, if any, being served by a PWS in whole or in part.

ADMIN DISTRICT
(C505)

Enter the code value representing the state administrative district, if any, being served by a PWS in whole or in part.

FEDERAL CONGRESS DISTRICT
(C507)

Enter the code value representing the federal congressional district being served by a PWS in whole or in part. When specified, FEDERAL CONGRESS DISTRICT must be a valid Federal congressional district code for the State.

STATE COUNTY
(C508)

Enter the STATE COUNTY code representing the county being served by the PWS. Users should supply either the state or FIPS version of county codes but not both.

FIPS COUNTY
(C509)

Enter the FIPS COUNTY code representing the county being served by the PWS. Users should supply either the state or FIPS version of county codes but not both.

CITY
(C513)

Enter the city, community, or jurisdiction being served by the PWS, in whole or in part.

INDIAN RESERVATION
(C515)

Enter the code value, if any, representing the Indian reservation or Alaska remote village being served by a PWS in whole or in part. When specified, this data element must be a valid Indian reservation or Alaska remote village code.

SECTION C1 - GEOGRAPHIC AREAS SERVED
DATA ELEMENT REGISTRATION TABLE

DATA ELEMENT NUM.	FORM REFERENCE NAME	A/N/D	JUST	SIN	ZERO FILL	REG. CODE	GRANT	CBR
C501	GA ID	N	L			3		N
C503	ADMIN REGION	A	L	Y				Y
C505	ADMIN DISTRICT	A	L	Y				Y
C507	FEDERAL CONGRESS DISTRICT	A	L	Y	Y			Y
C508	STATE COUNTY	A	L	Y				Y
C509	FIPS COUNTY	A	L		Y		4	Y
C513	CITY	A	L	Y			4	Y
C515	INDIAN RESERVATION	A	L	Y	Y			Y

LEGEND:

A/N/D	A =	ALPHANUMERIC, N=NUMERIC, D=DECIMAL
JUST	L =	LEFT JUSTIFY, R=RIGHT JUSTIFY, A=ALIGN
SIN	Y =	SKIP IF NONE OR NOT APPLICABLE
ZERO FILL	Y =	ENTER PRECEDING ZEROS OR ZERO FILL REMAINING DECIMAL PLACES
REG. CODE	1 =	OPERATIONALLY REQUIRED
	2 =	PROGRAMMATICALLY REQUIRED
	3 =	OPERATIONALLY REQUIRED, CONDITIONALLY
	4 =	PROGRAMMATICALLY REQUIRED, CONDITIONALLY

(SEE CHAPTER III, "DATA BASE REGISTRATION REQUIREMENTS," FOR FURTHER EXPLANATION)

GRANT	1 =	GRANT ELIGIBLE
	2 =	GRANT WITHHOLDING
	3 =	CONDITIONALLY GRANT ELIGIBLE
	4 =	CONDITIONALLY GRANT WITHHOLDING
CBR	Y =	CAN BE REMOVED (i.e., $ IN LEFT-MOST POSITION)
	N =	CANNOT BE REMOVED

SECTION C2 SERVICE AREAS (See Exhibit 10)

This section is used to enter data characterizing the type of area or areas served by the PWS. The following is entered via this section:

SERV ID
(C601)

Enter a SERV ID uniquely identifying a specific service area record.

See CHAPTER IV, "Record Identification and Maximum Occurrences" for user assignment and automatic generation of this ID.

TYPE/CAT
(C603)

Enter the code value characterizing the type of area serviced by the PWS. It is likely that a PWS will have several types of service areas, so the SDWIS/FED system will allow many types for each PWS in the data base. When specified, the TYPE/CAT must be a valid service area code applicable to the major service area types as defined in the following code list:

Code	Name
DC	Day Care Center
DI	Dispenser
HA	Homeowners Association
HM	Hotel/motel
HR	Highway Rest Area
IA	Industrial/agricultural
IC	Interstate Carrier
IN	Institution
MF	Medical Facility
MH	Mobile Home Park
MP	Mobile Home Park, Princ. Res.
MU	Municipality

Code	Name
OA	Other Area
ON	Other Non-transient Area
OR	Other Residential Area
OT	Other Transient Area
PA	Recreation Area
RA	Residential Area
RE	Retail Employees
RS	Restaurant
SC	School
SI	Sanitary Improvement District
SK	Summer Camp
SR	Secondary Residences
SS	Service Station
SU	Subdivision
WB	Water Bottler
WH	Wholesaler (Sells Water)

PRIMARY SERVICE FLAG
(C605)

Enter a "Y" if the service area is the primary (i.e., most prevalent) type of area served by the PWS. This data element should be valued for non-community and non-transient non-community PWSs. It is important to note that only one area served by a PWS can be designated as the primary type.

SECTION C2 - SERVICE AREAS
DATA ELEMENT REGISTRATION TABLE

DATA ELEMENT NUM.	FORM REFERENCE NAME	A/N/D	JUST	SIN	ZERO FILL	REG. CODE	GRANT	CBR
C601	SERV ID	N	L			3		N
C603	TYPE/CAT	A	L		Y	3	2	Y
C605	PRIMARY SERVICE FLAG	A	N/A		Y		2	Y

LEGEND:

A/N/D	A =	ALPHANUMERIC, N=NUMERIC, D=DECIMAL
JUST	L =	LEFT JUSTIFY, R=RIGHT JUSTIFY, A=ALIGN
SIN	Y =	SKIP IF NONE OR NOT APPLICABLE
ZERO FILL	Y =	ENTER PRECEDING ZEROS OR ZERO FILL REMAINING DECIMAL PLACES
REG. CODE	1 =	OPERATIONALLY REQUIRED
	2 =	PROGRAMMATICALLY REQUIRED
	3 =	OPERATIONALLY REQUIRED, CONDITIONALLY
	4 =	PROGRAMMATICALLY REQUIRED, CONDITIONALLY

(SEE CHAPTER III, "DATA BASE REGISTRATION REQUIREMENTS," FOR FURTHER EXPLANATION)

GRANT	1 =	GRANT ELIGIBLE
	2 =	GRANT WITHHOLDING
	3 =	CONDITIONALLY GRANT ELIGIBLE
	4 =	CONDITIONALLY GRANT WITHHOLDING
CBR	Y =	CAN BE REMOVED (i.e., $ IN LEFT-MOST POSITION)
	N =	CANNOT BE REMOVED

SECTION C3 ON-SITE VISITS (See Exhibit 10)

This section is used to enter data related to on-site visits made to a PWS. The SDWIS/FED data base has one on-site visit record for each on-site visit (such as a sanitary survey), reported to EPA. The following is entered via this section:

VISIT ID
(C701)

Whether user-supplied or GGC, the SDWIS/FED system will automatically generate the VISIT ID.

See CHAPTER IV, "Record Identification and Maximum Occurrences."

VISIT DATE (YEAR, MONTH, AND DAY)
(C703)

Enter the calendar date on which a visit was made to a PWS. When specified, VISIT DATE must be a valid calendar date and must be in the form "YYYYMMDD" where:

- YYYY Calendar Year.
- MM Calendar Month.
- DD Calendar Day.

VISIT REASON
(C705)

Enter the code value representing the reason a visit was made to a PWS. When specified, enter the appropriate code into position 1 of the VISIT REASON as follows:

- "1" Class I Survey (i.e., sanitary survey).
- "2" Class II Survey (i.e., other than a sanitary survey).

Position 2 is valid for Class II surveys. See the *SDWIS/FED On-Line Data Dictionary* for valid on-site visit reason codes. Position 2 must be blank if a Class I Survey is specified.

SECTION C3 - ON-SITE VISITS
DATA ELEMENT REGISTRATION TABLE

DATA ELEMENT NUM.	FORM REFERENCE NAME	A/N/D	JUST	SIN	ZERO FILL	REG. CODE	GRANT	CBR
C701	VISIT ID	N	L			3		N
C703	VISIT DATE	N	L					Y
C705	VISIT REASON	A	L					Y

LEGEND:

A/N/D	A =	ALPHANUMERIC, N=NUMERIC, D=DECIMAL
JUST	L =	LEFT JUSTIFY, R=RIGHT JUSTIFY, A=ALIGN
SIN	Y =	SKIP IF NONE OR NOT APPLICABLE
ZERO FILL	Y =	ENTER PRECEDING ZEROS OR ZERO FILL REMAINING DECIMAL PLACES
REG. CODE	1 =	OPERATIONALLY REQUIRED
	2 =	PROGRAMMATICALLY REQUIRED
	3 =	OPERATIONALLY REQUIRED, CONDITIONALLY
	4 =	PROGRAMMATICALLY REQUIRED, CONDITIONALLY

(SEE CHAPTER III, "DATA BASE REGISTRATION REQUIREMENTS," FOR FURTHER EXPLANATION)

GRANT	1 =	GRANT ELIGIBLE
	2 =	GRANT WITHHOLDING
	3 =	CONDITIONALLY GRANT ELIGIBLE
	4 =	CONDITIONALLY GRANT WITHHOLDING
CBR	Y =	CAN BE REMOVED (i.e., $ IN LEFT-MOST POSITION)
	N =	CANNOT BE REMOVED

Public Water System
Data Capture Form C

PWS ID
STATE ID NUMBER (C101)

ACTION CODE
I=INSERT M=MODIFY

BATCH SEQUENCE NUMBER

C1 GEOGRAPHIC AREAS SERVED

GA ID	ADMIN REGION	ADMIN DISTRICT	FEDERAL CONGRESS DISTRICT	STATE COUNTY	FIPS COUNTY	CITY	INDIAN RESERVATION
(C501)	(C503)	(C505)	(C507)	(C508)	(C509)	(C513)	(C515)

C2 SERVICE AREAS

SERVE ID	TYPE/CAT	PRIMARY SERVICE FLAG
(C601)	(C603)	(C605)

C3 ON-SITE VISITS

VISIT ID	VISIT DATE YR	MO	DAY	VISIT REASON
(C701)	(C703)			(C705)

Exhibit 10. Data Capture Form C

Data Capture Form C4

SECTION C4 MILESTONE DATA (See Exhibit 11)

This section is used to enter milestone data related to the Lead and Copper Rule. The SDWIS/FED data base has one milestone record for each milestone event reported to EPA. The following is entered via this section:

MILESTONE ID
(C801)

Enter a MILESTONE ID that will uniquely identify a specific milestone record.

See CHAPTER IV, "Record Identification and Maximum Occurrences" for user assignment and automatic generation of this ID.

MILESTONE DATE (YEAR, MONTH, AND DAY)
(C803)

Enter the calendar date on which a milestone occurred for a PWS. MILESTONE DATE must be greater than or equal to 1991/07/01, and less than or equal to the current date. Pb90 and Cu90 milestones may contain a future date (since an exceedence may be detected prior to the end of the sampling period). MILESTONE DATE must be a valid calendar date and must be in the form "YYYYMMDD" where:

- YYYY Calendar Year.
- MM Calendar Month.
- DD Calendar Day.

MILESTONE END DATE (YEAR, MONTH, AND DAY)
(C804)

This attribute signifies the date when a water system no longer meets the criteria which caused it to report a milestone code of "DONE." MILESTONE END DATE must be greater than the MILESTONE DATE. This data element is optional and is only valid if the Milestone Code (C805) = "DONE." MILESTONE END DATE must be a valid calendar date and must be in the form "YYYYMMDD" or "MMDDYYYY" where:

- YYYY Calendar Year.
- MM Calendar Month.
- DD Calendar Day.

MILESTONE CODE
(C805)

Enter the code value representing a valid milestone code. See the *SDWIS/FED On-Line Data Dictionary* for valid milestone codes.

MILESTONE COMMENT
(C813)

This is an optional field. Up to 40 characters may be entered.

MILESTONE VALUE
(C815)

MILESTONE VALUE is allowed with only milestone codes: Cu90 and LSLR. When specified, MILESTONE VALUE must be entered under the following rules:

- The integer portion cannot exceed 7 positions.
- The decimal portion cannot exceed 8 positions.
- Must be numeric.
- Must be greater than or equal to zero.
- For LSLR records, the value for C815 must be less than or equal to 1.00.
- For Cu90 records, the value for C815 must be greater than or equal to 1.35.

REASON CODE
(C817)

REASON CODE is only allowed with milestone code “DEEM” and “DONE.” REASON CODE is mandatory with milestone code “DEEM” See the *SDWIS/FED On-Line Data Dictionary* for valid reason codes.

SECTION C4 - PWS MILESTONE EVENTS
DATA ELEMENT REGISTRATION TABLE

DATA ELEMENT NUM.	FORM REFERENCE NAME	A/N/D	JUST	SIN	ZERO FILL	REG. CODE	GRANT	CBR
C801	MILESTONE ID	N	L			3		N
C803	MILESTONE DATE	N	L			2		N
C804	MILESTONE END DATE	N	L			2		N
C805	MILESTONE CODE	A	N/A			2		N
C813	MILESTONE COMMENT	A	L	Y				Y
C815	MILESTONE VALUE	D	A	Y		4		Y
C817	REASON CODE	A	N/A	Y		4		Y

LEGEND:

A/N/D	A =	ALPHANUMERIC, N=NUMERIC, D=DECIMAL
JUST	L =	LEFT JUSTIFY, R=RIGHT JUSTIFY, A=ALIGN
SIN	Y =	SKIP IF NONE OR NOT APPLICABLE
ZERO FILL	Y =	ENTER PRECEDING ZEROS OR ZERO FILL REMAINING DECIMAL PLACES
REG. CODE	1 =	OPERATIONALLY REQUIRED
	2 =	PROGRAMMATICALLY REQUIRED
	3 =	OPERATIONALLY REQUIRED, CONDITIONALLY
	4 =	PROGRAMMATICALLY REQUIRED, CONDITIONALLY

(SEE CHAPTER III, "DATA BASE REGISTRATION REQUIREMENTS," FOR FURTHER EXPLANATION)

GRANT	1 =	GRANT ELIGIBLE
	2 =	GRANT WITHHOLDING
	3 =	CONDITIONALLY GRANT ELIGIBLE
	4 =	CONDITIONALLY GRANT WITHHOLDING
CBR	Y =	CAN BE REMOVED (i.e., $ IN LEFT-MOST POSITION)
	N =	CANNOT BE REMOVED

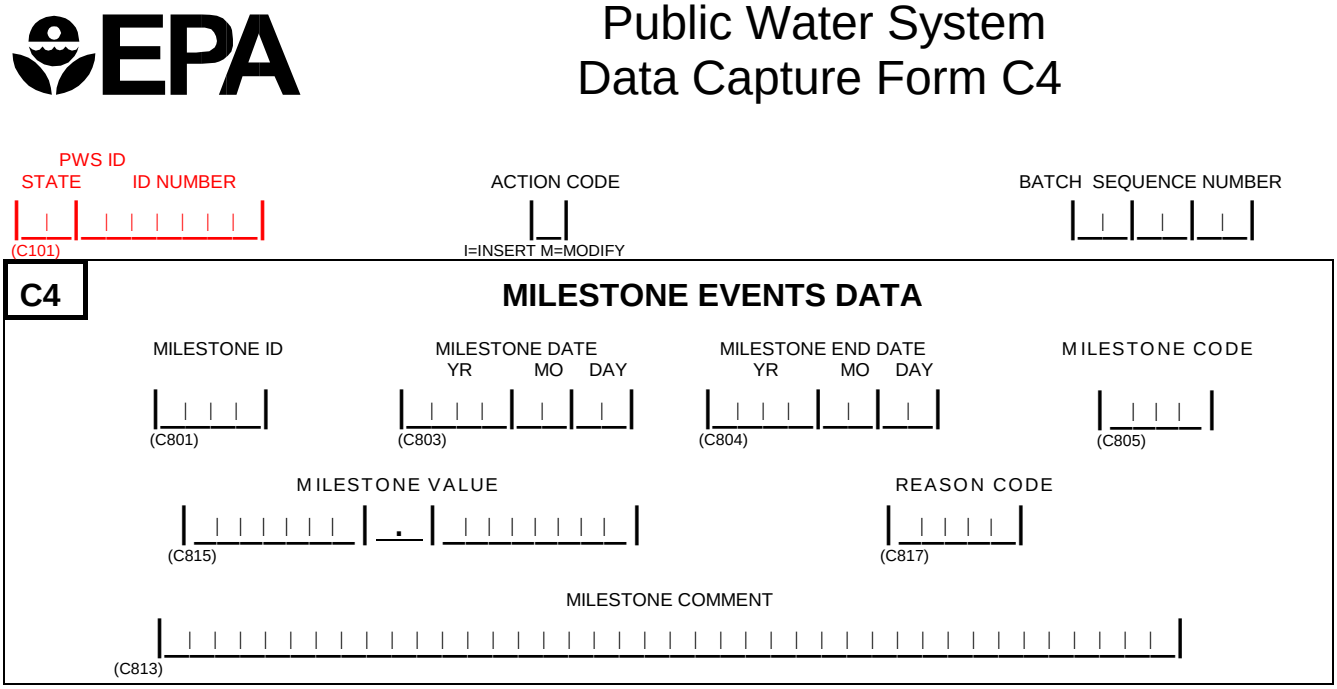

Exhibit 11. Data Capture Form C4

Data Capture Form D

SECTION D1 VIOLATION DATA (See Exhibit 12)

This section is used to enter data characterizing a violation of a primary drinking water regulation issued to a PWS by a State or Federal agency. The SDWIS/FED data base has one violation record for each violation reported to EPA. The following is entered via this section:

VIOLATION ID (FY AND ID NUMBER)
(C1101)

Enter a VIOLATION ID uniquely identifying a specific violation of a primary drinking water regulation issued to a PWS, by a State or Federal agency under the following rules:

Positions 1 - 2 contain the Federal fiscal year (FY) in which the violation was issued by the State or Federal agency. Federal FY must always be specified, must always be greater than 77, must always be equal to or less than the current Federal FY, and must always be numeric. The FY in all violation IDs must be the same when submitting a total replace of violations.

Positions 3 - 7 contain an ID NUMBER unique for the PWS for the Federal FY.

See CHAPTER IV, "Record Identification and Maximum Occurrences" for user assignment and automatic generation of this ID.

CONTAMINANT
(C1103)

Enter the code value representing the identification number of a contaminant for which a PWS was issued a violation of a primary drinking water regulation. CONTAMINANT is required when VIOLATION TYPE is equal to 01, 02, 03, or 04 and 21-26 (TCR).

CONTAMINANT must be a valid contaminant code as found in the SDWIS/FED TFRCNTMN Code Table. Group contaminant codes (i.e., codes with asterisks [*] or spaces in positions 1-4) are no longer accepted during DTF processing.

VIOLATION TYPE
(C1105)

Enter the code value representing the type of violation that was issued to a PWS. VIOLATION TYPE must be a valid violation type code as found in the *SDWIS/FED On-Line Data Dictionary*. VIOLATION TYPE is required for each violation reported.

Note: Some Lead and Copper Rule violation types were discontinued in January 2000. The violation type data stored in SDWIS/FED has been converted to reflect the violation type code modifications. To allow users an opportunity to adjust their reporting process, SDWIS/FED will convert the violation type code value contained in the DTF file to the appropriate violation type. Refer to the *SDWIS/FED On-Line Data Dictionary* to determine which violation types are changed.

COMPLIANCE PERIOD BEGIN (YEAR, MONTH, AND DAY)
(C1107)

Enter the calendar date of the beginning of the compliance period for which the PWS was in violation of a primary drinking water regulation. COMPLIANCE PERIOD BEGIN is required for all violations. For Violation Type 71, COMPLIANCE PERIOD BEGIN must be either 10/19/1999 or 07/01/2YYY. For Violation Type 72, COMPLIANCE PERIOD BEGIN must be greater than 10/19/1999.

COMPLIANCE PERIOD END (YEAR, MONTH, AND DAY)
(C1109)

Enter the calendar date of the end of a compliance period in which a PWS was in violation of a primary drinking water regulation. Under certain conditions (i.e., Violation Type 51, 52, 56, 57, 58, 63, 64, or 65), the system will default the date to 12/31/2015. Any date entered by the user will be ignored. For Violation Type 71 or 72, the system defaults to 12/31/2015 and any date entered by the user will be rejected.

COMPLIANCE PERIOD DURATION
(C1111)

Enter the number of calendar months of the compliance period during which a PWS was in violation of a primary drinking water regulation. This data element should not be input when COMPLIANCE PERIOD END is specified. If duration is entered, it is converted to a date which is stored in COMPLIANCE PERIOD END. Under certain conditions (i.e., Violation Type 51, 52, 56, 57, 63, 64, or 65), the system will default the date to 12/31/2015. Any duration entered by the user will be ignored. For Violation Type 71 or 72, the system defaults to 12/31/2015 and any date entered by the user will be rejected.

AWARENESS DATE (YEAR, MONTH, AND DAY)
(C1115)

Enter the calendar date the primacy agency became aware of this violation. AWARENESS DATE is required for CHEM/RAD monitoring violations.

ANALYSIS RESULT
(C1123)

Enter the numeric value representing the result obtained from a single analysis, or the average result obtained from multiple analyses, that led to the issuance of the MCL violation for a PWS. When specified, ANALYSIS RESULT must be entered under the following rules:

- Must be specified for CHEM/RAD MCL violations.
- The integer portion cannot exceed 6 positions.
- The decimal portion cannot exceed 9 positions.
- Must be numeric.
- Must be greater than or equal to zero.

The rules for entering decimal numbers into the SDWIS/FED system, are discussed in CHAPTER V, “General Coding Instructions.”

MCL VIOLATED
(C1125)

Enter the numeric value representing the maximum contaminant level which was exceeded that led to the issuance of an MCL violation for a PWS. MCL VIOLATED is required for inserting a violation record only if the primacy agency has a different MCL than in the federal regulations. When specified, MCL VIOLATED must be entered under the following rules:

- The integer portion cannot exceed 6 positions.
- The decimal portion cannot exceed 9 positions.
- Must be numeric.
- Must be greater than or equal to zero.

The rules for entering decimal numbers into the SDWIS/FED system, are discussed in CHAPTER V, “General Coding Instructions.”

NUM SAMPLES REQUIRED
(C1127)

Enter the number of samples for monitoring and reporting violations required to be collected, analyzed, and reported by a PWS for a specific compliance period. If not a monitoring or reporting violation, do not provide this data.

NUM SAMPLES TAKEN
(C1129)

Enter the number of samples for monitoring and reporting violations actually collected, analyzed, and reported by a PWS for a specific compliance period. If not a monitoring or reporting violation, do not provide this data.

MAJOR VIOLATION
(C1131)

Enter a "Y" if a major monitoring or reporting violation. A major violation is defined by the specific reporting guidance for the affected rule.

Enter an "N" if a minor violation.

If not a monitoring or reporting violation, leave blank. MAJOR VIOLATION does not apply to check sampling violations.

SE ID
(C1143)

Enter the SE ID of the source, plant or entity for which the violation was entered.

The transaction can only be used for Chem/Rad, Violation Types 01-04.

PUBLIC NOTICE UNDERLYING VIOLATION ID
(C1144)

The underlying Violation ID for a Type 75 Public Notice (PN) Violation. An underlying violation is a NPDWR violation which becomes associated with a PN violation when the state fails to notify the public about its occurrence.

PUBLIC NOTICE UNDERLYING CRITERIA
(C1145)

A set of criteria consisting of a Violation Type, contaminant, compliance period begin date, and source entity ID for an underlying violation that associates a Type 75 PN violation with its underlying Violation.

SECTION D1 - VIOLATION DATA
DATA ELEMENT REGISTRATION TABLE

DATA ELEMENT NUM.	FORM REFERENCE NAME	A/N/D	JUST	SIN	ZERO FILL	REG. CODE	GRANT ELIG.	CBR
C1101	VIOLATION ID	A	L		Y	3		N
C1103	CONTAMINANT	A	L	Y		4		Y
C1105	VIOLATION TYPE	A	L		Y	2		N
C1107	COMPLIANCE PERIOD BEGIN	N	L			2		N
C1109	COMPLIANCE PERIOD END	N	L			4		Y
C1111	COMPLIANCE PERIOD DURATION	N	L			4		Y
C1115	AWARENESS DATE	N	L					Y
C1123	ANALYSIS RESULT	D	A	Y		4		Y
C1125	MCL VIOLATED	D	A	Y		4		Y
C1127	NUM SAMPLES REQUIRED	N	L	Y				Y
C1129	NUM SAMPLES TAKEN	N	L	Y		4		Y
C1131	MAJOR VIOLATION	A	N/A	Y		4		Y
C1143	SE ID	N	L					Y
C1144	PUBLIC NOTICE UNDERLYING VIOLATION ID	A	L			4		N
C1145	PUBLIC NOTICE UNDERLYING CRITERIA	A	L			4		N

LEGEND:

A/N/D	A =	ALPHANUMERIC, N=NUMERIC, D=DECIMAL
JUST	L =	LEFT JUSTIFY, R=RIGHT JUSTIFY, A=ALIGN
SIN	Y =	SKIP IF NONE OR NOT APPLICABLE
ZERO FILL	Y =	ENTER PRECEDING ZEROS OR ZERO FILL REMAINING DECIMAL PLACES
REG. CODE	1 =	OPERATIONALLY REQUIRED
	2 =	PROGRAMMATICALLY REQUIRED
	3 =	OPERATIONALLY REQUIRED, CONDITIONALLY
	4 =	PROGRAMMATICALLY REQUIRED, CONDITIONALLY

(SEE CHAPTER III, "DATA BASE REGISTRATION REQUIREMENTS," FOR FURTHER EXPLANATION)

GRANT	1 =	GRANT ELIGIBLE
	2 =	GRANT WITHHOLDING
	3 =	CONDITIONALLY GRANT ELIGIBLE
	4 =	CONDITIONALLY GRANT WITHHOLDING
CBR	Y =	CAN BE REMOVED (i.e., $ IN LEFT-MOST POSITION)
	N =	CANNOT BE REMOVED

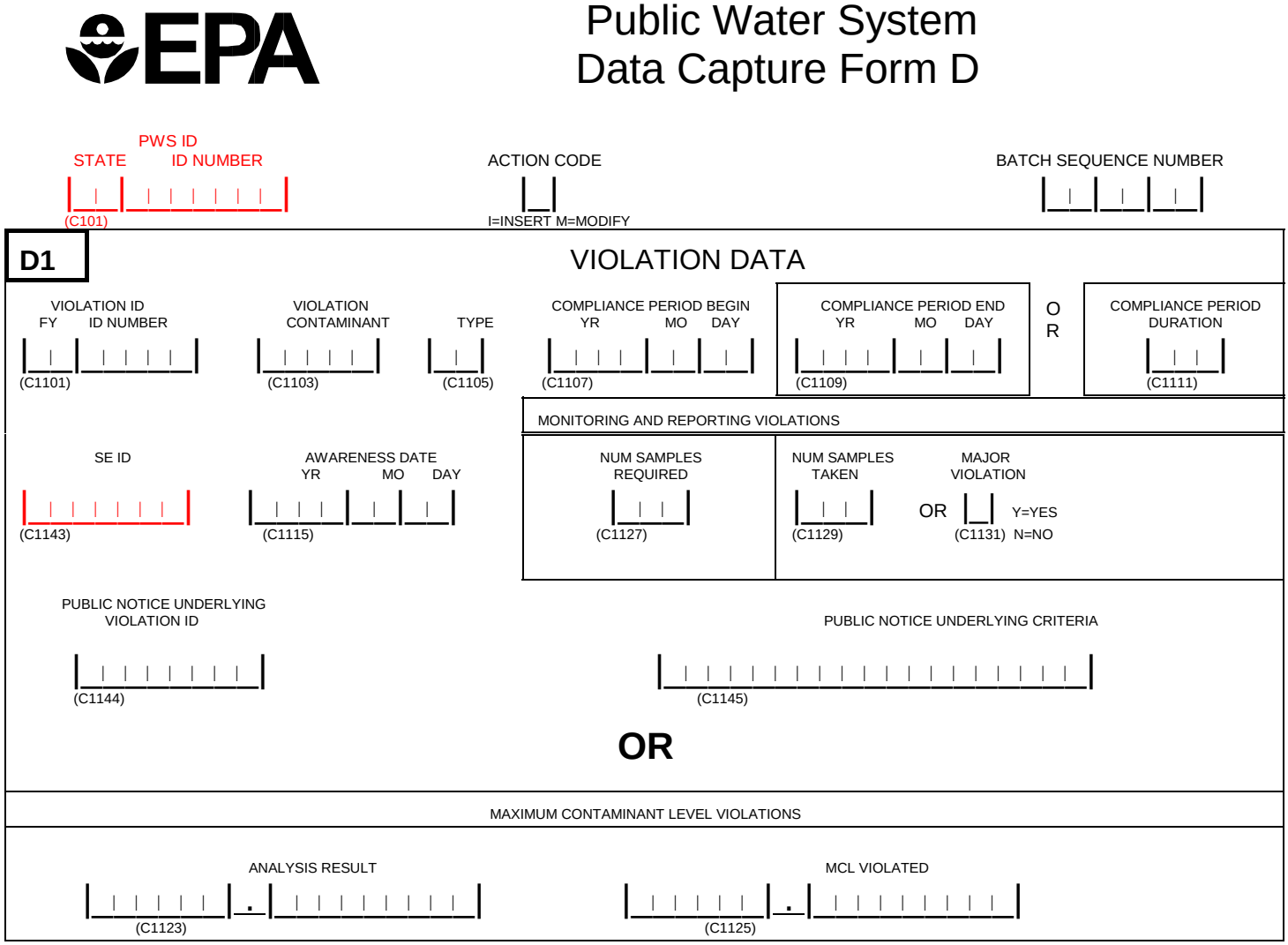

Exhibit 12. Data Capture Form D

Data Capture Form E

SECTION E1 ENFORCEMENT DATA (See Exhibit 14)

This section is used to enter data characterizing an enforcement action taken against a PWS by a State or Federal agency. The SDWIS/FED data base has one enforcement record for each enforcement action reported to EPA. The following is entered via this section:

ENFORCEMENT ID (FY AND ID NUMBER)
(C1201)

Enter an ENFORCEMENT ID uniquely identifying a specific enforcement action taken by a State or Federal agency against a PWS.

Positions 1 - 2 contain the Federal fiscal year (FY) in which the enforcement action was issued. Fiscal year must always be specified, must always be greater than 77, must always be equal to or less than the current Federal fiscal year and must always be numeric. The fiscal year in all enforcement IDs must be the same when submitting a total replace of enforcements.

Positions 3 - 7 contain an ID NUMBER which must be unique for each enforcement action for the PWS for the Federal fiscal year.

See CHAPTER IV, "Record Identification and Maximum Occurrences" for user assignment and automatic generation of this ID.

FOLLOW-UP ACTION
(C1205)

Enter the three position code value representing the enforcement action that was taken by a State or Federal agency against a PWS. Position 1 indicates which agency performed the action. It has values of either:

- "S" for State.
- "E" for EPA (Federal).

The second position indicates classification of action and has values of either:

- "I" informal action.
- "F" formal action.
- "O" other action.

- ! “T” system-generated TCR action.

- ! “S” system-generated SWTR action.

The third position identifies the specific action taken and contains alphanumeric values. These code values may be found in the *SDWIS/FED On-Line Data Dictionary.*

Note: SF2 and EF2 are generated by the SDWIS/FED system as “mask codes” used to conceal certain Enforcement Action Codes which may be enforcement-sensitive. SF2 and EF2 cannot be entered into the SDWIS/FED system via DTF transactions.

ENFORCEMENT DATE (YEAR, MONTH, AND DAY)
(C1203)

Enter the calendar date on which the enforcement action was taken by the State or Federal agency against the PWS.

ENFORCEMENT COMMENT
(C1215)

Enter any alphanumeric value, limited to 40 characters, representing any description, characteristic or attribute applicable to the associated enforcement action.

When updating enforcement actions in the “Traditional Update” mode, the “M” (Modify) action code is used to modify the following data elements:

- ! C1203 - ENF-ACTION-DATE.

- ! C1205 - ENF-FOLLOW-UP-ACTION.

Although a new enforcement may be inserted into the data base without any links to violations specified, the enforcement *should* be linked to one or more violations. When inserting a new enforcement, the enforcement link(s) are included with the enforcement as inserts (Action Code of “I”). Four methods are provided to link enforcement actions to violation records. The four methods are: (1) ASSOCIATED VIOLATION RANGE (X5000), (2) ASSOCIATED VIOLATION IDS (Y5000), (3) ASSOCIATED VIOLATION CONTAMINANT GROUPS (Z5000), and (4) ASSOCIATED J5000 GROUP (J5000). Each enforcement link method is discussed below. The rules for entering violation data may be found in the instructions for Data Capture Form D (VIOLATION DATA).

It is important to note that once an enforcement record has been posted to the SDWIS/FED Data Base, the user must use the Modify (M) action code to establish any *additional* links to the specified violation records. Therefore, the user links enforcements to violation records in two

ways: (1) when initially inserting an enforcement record into the SDWIS/FED Data Base by the use of an "Insert" transaction (Action Code of "I"), or (2) by modifying the existing enforcement record in the SDWIS/FED Data Base by the use of a "modify" transaction (Action Code "M").

When adding additional links to an existing enforcement, it is not necessary to provide DTF lines for C1203 or C1205. Only DTF line(s) for the X5000, Y5000, Z5000, or J5000 link methods are necessary.

If an enforcement action is applied erroneously to certain violation records, it can only be corrected by first deleting the enforcement action (with an action code of "D") and then re-inserting it (with an action code of "I") with the proper violations identified by the X5000, Y5000, Z5000, or J5000 update methods.

It is important to note that when an enforcement action is deleted from the SDWIS/FED data base, *all* links to violations for that enforcement are also deleted.

Only links of one type (e.g., Y5000) are allowed for a single enforcement. SDWIS/FED will reject the enforcement and all its links if there are multiple types (e.g., X5000 and Y5000) for a single enforcement.

ASSOCIATED VIOLATION RANGE (X5000)
BEGIN (YEAR, MONTH, AND DAY) and END (YEAR, MONTH, AND DAY)

Enter the beginning and ending dates accommodating all the violations to which the reported enforcement action applies: if either the beginning date or the ending date for a violation record compliance period falls within the range of dates specified, SDWIS/FED will automatically link this enforcement action to that violation. Alternatively, if the end date in the X5000 ASSOCIATED VIOLATION RANGE is left blank, then the ENFORCEMENT ACTION DATE will be used as the end date in the X5000 ASSOCIATED VIOLATION RANGE. In all cases, the beginning and ending dates in the X5000 ASSOCIATED VIOLATION RANGE must be equal to or less than the ENFORCEMENT ACTION DATE. The X5000 BEGIN DATE must be less than or equal to the X5000 END DATE and the X5000 END DATE must be greater than or equal to the X5000 BEGIN DATE.

For example, if a violation record had a compliance period begin date of 1998/06/15 and a compliance period end date of 1998/07/15, the following X5000 ASSOCIATED VIOLATION RANGES would cause the enforcement action to be linked to that violation:

- BEGIN 1998/05/15 - END 1998/06/15 (Compliance period begin date in violation falls within the specified range).

- BEGIN 1998/07/15 - END 1998/08/15 (Compliance period end date in violation falls within the specified range).

Only one X5000 ASSOCIATED VIOLATION RANGE link may be entered on a single DTF line. If the user wishes to enter more than one X5000 ASSOCIATED VIOLATION RANGE links, additional DTF X5000 transaction lines may be provided.

If *all* X5000 ASSOCIATED VIOLATION RANGE links for a single enforcement are rejected because of an invalid date or other syntax error, the enforcement will also be rejected. However, if no violations meet the X5000 ASSOCIATED VIOLATION RANGE criteria as outlined above, no links will be established, but the enforcement *will* be posted (inserted) to the data base. If subsequent violations that meet the X5000 ASSOCIATED VIOLATION RANGE criteria are inserted into the data base, they will automatically become linked to the appropriate enforcement(s).

Any traditional update or total replace run which contains either actions or both inventory and actions will generate a warning message which appears on the banner page of the error report stating: "X5000s for enforcements in Fiscal Year 2003 and onwards will be rejected starting 10/1/2002." This warning message will be discontinued after September 30, 2002.

ASSOCIATED VIOLATION IDS (Y5000)
FY AND ID NUMBER

Enter the specific violation ID(s) to which the enforcement action is related. When the enforcement action is posted to the data base, a link will be established between the enforcement record and each violation record matching the specified Y5000 ASSOCIATED VIOLATION ID(s).

A maximum of four Y5000 ASSOCIATED VIOLATION IDs are allowed on a single DTF transaction line. If the user wishes to enter more Y5000 ASSOCIATED VIOLATION IDs than are provided for the same enforcement action, additional DTF Y5000 transaction lines may be provided.

A Y5000 link should not be applied where the Enforcement Action Date is less than the Violation Begin Date. Enforcement actions should not be related to future violations, except in the case of an "appropriate" enforcement action using J5000 link addressing conditions covered by the Significant Non-Complier (SNC) Exception Tracking System (SETS). For more information on SETS, refer to the *System User's Guide for SDWIS/FED*.

The Y5000 link will be rejected when the ENFORCEMENT ACTION CODE (C1205) is "SII" or "EII," and the Violation Type (C1105) for the violation being linked to is *not* a 71 or 72.

If *all* Y5000 ASSOCIATED VIOLATION ID links for a single enforcement are rejected because of an invalid Violation ID or other syntax error, the enforcement will also be rejected. Likewise, if no violations match the Y5000 ASSOCIATED VIOLATION IDs provided with the enforcement, the enforcement will also be rejected.

ASSOCIATED VIOLATION CONTAMINANT GROUP (Z5000)
TYPE, CONTAM, COMPLIANCE PERIOD BEGIN DATE (YEAR, MONTH, AND DAY)

Enter the ASSOCIATED VIOLATION CONTAMINANT GROUP data, which consists of Violation Type, Contaminant Code and Compliance Period Begin Date, of those violations to be linked to this enforcement. If the violation record data exactly matches the specified ASSOCIATED VIOLATION CONTAMINANT GROUP, SDWIS/FED will automatically establish a link between the enforcement record and that violation record. If no exact matches are found, no links will be established.

A maximum of two Z5000 ASSOCIATED VIOLATION CONTAMINANT GROUPS may be entered on a single DTF transaction line. If the user wishes to enter more Z5000 ASSOCIATED VIOLATION CONTAMINANT GROUPS than are provided for on a single Z5000 transaction line, additional DTF transaction lines may be provided.

When the ENFORCEMENT ACTION CODE (C1205) is "SII" or "EII," the Violation Type Code and Contaminant Code in the Z5000 ASSOCIATED VIOLATION CONTAMINANT GROUP must be must be 71 or 72 and 7000, respectively. When the Violation Type Code is 71, COMPLIANCE PERIOD BEGIN in the Z5000 ASSOCIATED VIOLATION CONTAMINANT GROUP must be 10/19/1999 or 07/01/2YYY. When the Violation Type Code is 72, COMPLIANCE PERIOD BEGIN must be greater than 10/19/1999.

If the VIOLATION TYPE and CONTAMINANT CODE in the Z5000 ASSOCIATED VIOLATION CONTAMINANT GROUP is not a valid combination, the Z5000 ASSOCIATED VIOLATION CONTAMINANT GROUP link will be rejected.

If the violation type/contaminant code combination is not valid, the link transaction will be rejected. For valid combinations of violation type and contaminant code, please see the edit criteria for contaminant codes in the On-line Data Dictionary.

If *all* Z5000 ASSOCIATED VIOLATION CONTAMINANT GROUP links for a single enforcement are rejected because of an invalid date or other syntax error, the enforcement will also be rejected. However, if no violations meet the Z5000 ASSOCIATED VIOLATION CONTAMINANT GROUP criteria as outlined above, no links will be established, but the enforcement *will* be posted (inserted) to the data base. If subsequent violations that meet the

Z5000 ASSOCIATED VIOLATION CONTAMINANT GROUP criteria are inserted into the data base, they will automatically become linked to the appropriate enforcement(s).

ASSOCIATED J5000 GROUP (J5000)
VIO TYPE, CONTAM CODE, RULE CODE, ENF ACTION BEGIN DATE (YEAR, MONTH, AND DAY), ENF COMP DATE (YEAR, MONTH, AND DAY)

Enter the ASSOCIATED J5000 GROUP data, which consists of Violation Type, Contaminant Code or Rule Code, Enforcement Period Begin Date, and Enforceable Compliance Date, of those violations to be linked to this enforcement. If the violation record data exactly matches the specified ASSOCIATED J5000 GROUP, SDWIS/FED will automatically establish a link between the enforcement record and that violation record.

Duplicate J5000 links (all J5000 data identical except for the expiration date) for the same enforcement should not be submitted because the link to the violation will only be established for the first J5000 submitted.

J5000 cannot be used to link CCR Violations (Violation Type Codes 71 or 72 or Contaminant Code 7000 or Rule CCR) to Enforcements.

J5000 cannot be used with EOX or SOX enforcements.

A maximum of one ASSOCIATED J5000 Group may be entered on a single DTF transaction line. If the user wishes to enter more than one ASSOCIATED J5000 GROUP, additional DTF transaction lines may be provided.

If *all* ASSOCIATED J5000 GROUP links for a single enforcement are rejected because of an invalid date or other syntax error, the enforcement will also be rejected. Likewise, If no violations are found to match the ASSOCIATED J5000 GROUP, enforcement action will reject.

Note: Some Lead and Copper Rule violation types were discontinued in January 2000. The enforcement action link data stored in SDWIS/FED has been converted to reflect the violation type code modifications. To allow users an opportunity to adjust their reporting process, SDWIS/FED will convert the enforcement action link violation type code value contained in the DTF file to the appropriate violation type. Refer to the *SDWIS/FED On-Line Data Dictionary* to determine which violation types are changed.

Note: Multiple links in a single DTF transaction line, which exceed the maximum allowable number (see Exhibit 13), will be rejected with the Error Message: “TOO MANY LINKS FOR ONE DTF TRANSACTION.”

DTF Transaction	Maximum Allowable Number of Links
X5000	1
Y5000	4
Z5000	2 or 3 (depends on year length)
J5000	1

Exhibit 13. Maximum Allowable Number of Links per DTF Transaction

Note: To delete an existing link, enter the PWS ID, the Enforcement ID, an Action Code "D," and the appropriate record number as follows:

X5000 Date Range.
Y5000 Violation ID.
Z5000 Violation Type, Contaminant, and Begin Date.
J5000 Enforcement Action Begin Enforcement Completion End Date, Violation Type, and Contaminant Code or Rule Code.

See CHAPTER II, "Data Formatting Requirements" for further information on X5000, Y5000, Z5000, and J5000 enforcement processing.

SECTION E1 - ENFORCEMENT DATA

DATA ELEMENT REGISTRATION TABLE

DATA ELEMENT NUM.	FORM REFERENCE NAME	A/N/D	JUST	SIN	ZERO FILL	REG. CODE	GRANT	CBR
C1201	ENFORCEMENT ID	A	L			3		N
C1203	ENFORCEMENT DATE	N	L			2		N
C1205	FOLLOW-UP ACTION	A	L			2		N
C1215	ENFORCEMENT COMMENT	A	L	Y				Y

LEGEND:

A/N/D	A =	ALPHANUMERIC, N=NUMERIC, D=DECIMAL
JUST	L =	LEFT JUSTIFY, R=RIGHT JUSTIFY, A=ALIGN
SIN	Y =	SKIP IF NONE OR NOT APPLICABLE
ZERO FILL	Y =	ENTER PRECEDING ZEROS OR ZERO FILL REMAINING DECIMAL PLACES
REG. CODE	1 =	OPERATIONALLY REQUIRED
	2 =	PROGRAMMATICALLY REQUIRED
	3 =	OPERATIONALLY REQUIRED, CONDITIONALLY
	4 =	PROGRAMMATICALLY REQUIRED, CONDITIONALLY

(SEE CHAPTER III, "DATA BASE REGISTRATION REQUIREMENTS," FOR FURTHER EXPLANATION)

GRANT	1 =	GRANT ELIGIBLE
	2 =	GRANT WITHHOLDING
	3 =	CONDITIONALLY GRANT ELIGIBLE
	4 =	CONDITIONALLY GRANT WITHHOLDING
CBR	Y =	CAN BE REMOVED (i.e., $ IN LEFT-MOST POSITION)
	N =	CANNOT BE REMOVED

Public Water System
Data Capture Form E

PWS ID
STATE ID NUMBER
(C101)

ACTION CODE
I=INSERT M=MODIFY

BATCH SEQUENCE NUMBER

E1 **ENFORCEMENT DATA**

ENFORCEMENT ID
FY ID NUMBER
(C1201)

FOLLOW-UP ACTION
(C1205)

ENFORCEMENT DATE
YR MO DAY
(C1203)

ENFORCEMENT COMMENT
(C1215)

+

ASSOCIATED VIOLATION RANGE (X5000)

BEGIN
YR MO DAY

END
YR MO DAY
(X5000)

OR

ASSOCIATED VIOLATION IDS (Y5000)

VIOLATION ID 1
FY ID NUMBER

VIOLATION ID 2
FY ID NUMBER

VIOLATION ID 3
FY ID NUMBER

VIOLATION ID 4
FY ID NUMBER
(Y5000)

OR

ASSOCIATED VIOLATION CONTAMINANT GROUPS (Z5000)

COMPLIANCE PERIOD BEGIN DATE
TYPE CONTAM YEAR MO DAY

COMPLIANCE PERIOD BEGIN DATE
TYPE CONTAM YEAR MO DAY
(Z5000)

OR

ASSOCIATED J5000 GROUP (J5000)

ENF ACTION BEGIN DATE
YEAR MO DAY

ENF COMP DATE
YEAR MO DAY

VIO TYPE

CONTAM CODE

RULE CODE
(J5000)

Exhibit 14. Data Capture Form E

Data Capture Form F

SECTION F1 VARIANCES, EXEMPTIONS, AND OTHER RELATED DATA

(See Exhibit 15)

This section is used to enter data characterizing a variance, exemption, or other related data pending for, or granted to, a PWS. The SDWIS/FED data base has one variance or exemption record for each variance or exemption reported to EPA. The following is entered via this section:

VE ID (FY AND ID NUMBER)
(C3001)

Enter a VE ID uniquely identifying a specific variance, exemption, or other related data record to be associated with a PWS as follows:

Positions 1 - 2 contain the fiscal year (FY) in which the variance, exemption, or other related data was reported to EPA. When adding, deleting or modifying this record, FY must always be specified, must always be equal to or less than the current FY, must be numeric, and cannot be less than 78.

See CHAPTER IV, "Record Identification" for user assignment and automatic generation of this ID.

CONTAMINANT
(C3003)

Enter the code value representing the contaminant associated with the variance, exemption, or other related data reported by the primacy agency. This data element must be a valid contaminant code or a valid contaminant group code as found in the *SDWIS/FED TRFCNTMN Code Table.*

RECORD TYPE
(C3005)

Enter the code value representing whether this is a variance, exemption, turbidity waiver, filtration exclusion, filtration requirement or other record. Valid RECORD TYPE codes may be found in the *SDWIS/FED On-Line Data Dictionary.*

EFFECTIVE DATE (YEAR, MONTH, AND DAY)
(C3007)

Enter the calendar date on which the variance, exemption, or other related data granted to a PWS by a primacy agency became, or will become, effective. When specified, EFFECTIVE DATE must be less than EXPIRATION DATE.

EXPIRATION DATE (YEAR, MONTH, AND DAY)
(C3009)

Enter the calendar date on which a variance, exemption, or other related data granted to a PWS expired, or will expire. When specified, EXPIRATION DATE must be after the EFFECTIVE DATE.

STATUS CODE
(C3011)

Enter the code value describing the current status of a variance or exemption pending for, or granted to, a PWS by a primacy agency. When specified, STATUS CODE must be a valid variance or exemption status code as described in the *SDWIS/FED On-Line Data Dictionary*.

MODIFIED MCL
(C3013)

Enter the numeric value representing the modified maximum contaminant level approved as a condition to a variance or an exemption granted to a PWS by a primacy agency.

When specified, MODIFIED MCL must be entered under the following rules:

- The integer portion cannot exceed 7 positions.
- The decimal portion cannot exceed 8 positions.
- Must be numeric.
- Must be greater than or equal to zero.
- A decimal point may or may not appear.
- A decimal point must be specified if a fractional amount is intended.

TREATMENT PROCESS
(C3015)

Enter the code value representing the treatment process for which a variance, exemption, or other related data record is being granted to a PWS by a primacy agency. When specified, this TREATMENT PROCESS must be a valid treatment process code as described in the *SDWIS/FED On-Line Data Dictionary*.

ALTERNATE PROCESS
(C3017)

Enter the code value representing the alternate process for which a variance or exemption is being granted to a PWS by a primacy agency. When specified, this data element must be a valid treatment process code as described in the *SDWIS/FED On-Line Data Dictionary*.

REASON
(C3019)

Enter the code value representing the reason for which a variance, exemption or Filtration Requirement has been granted to a PWS by a primacy agency. When specified, this data element must be a valid reason code as described in the *SDWIS/FED On-Line Data Dictionary*.

VULNERABILITY FLAG
(C3027)

Enter the code value indicating (Y)es or (N)o whether the associated source-entity is vulnerable for the contaminant specified.

ALTERNATE MONITORING FREQUENCY
(C3029)

Enter the number of months (e.g., 002) representing an alternative monitoring frequency for the given contaminant.

VE SE ID
(C3031)

Enter the numeric value uniquely identifying a specific source of water utilized by, or an entity (e.g., entry point, treatment, reservoir, etc.) associated with this variance, exemption or other related data.

SECTION F1 - VARIANCES, EXEMPTIONS AND OTHER RELATED DATA
DATA ELEMENT REGISTRATION TABLE

DATA ELEMENT NUM.	FORM REFERENCE NAME	A/N/D	JUST	SIN	ZERO FILL	REG. CODE	GRANT	CBR
C3001	VE ID	A	L			3		N
C3003	CONTAMINANT	A	L			4		N
C3005	RECORD TYPE	A	L			2		N
C3007	EFFECTIVE DATE	N	L			4		Y
C3009	EXPIRATION DATE	N	L			4		Y
C3011	STATUS CODE	A	N/A			4		N
C3013	MODIFIED MCL	D	A	Y		4		Y
C3015	TREATMENT PROCESS	N	L	Y				Y
C3017	ALTERNATE PROCESS	N	L	Y		4		Y
C3019	REASON	N	L	Y		4		Y
C3027	VULNERABILITY FLAG	A		Y				Y
C3029	ALTERNATE MONITORING FREQUENCY	N	L	Y				Y
C3031	SE ID	N	L	Y				Y

LEGEND:

A/N/D	A =	ALPHANUMERIC, N=NUMERIC, D=DECIMAL
JUST	L =	LEFT JUSTIFY, R=RIGHT JUSTIFY, A=ALIGN
SIN	Y =	SKIP IF NONE OR NOT APPLICABLE
ZERO FILL	Y =	ENTER PRECEDING ZEROS OR ZERO FILL REMAINING DECIMAL PLACES
REG. CODE	1 =	OPERATIONALLY REQUIRED
	2 =	PROGRAMMATICALLY REQUIRED
	3 =	OPERATIONALLY REQUIRED, CONDITIONALLY
	4 =	PROGRAMMATICALLY REQUIRED, CONDITIONALLY

(SEE CHAPTER III, "DATA BASE REGISTRATION REQUIREMENTS," FOR FURTHER EXPLANATION)

GRANT	1 =	GRANT ELIGIBLE
	2 =	GRANT WITHHOLDING
	3 =	CONDITIONALLY GRANT ELIGIBLE
	4 =	CONDITIONALLY GRANT WITHHOLDING
CBR	Y =	CAN BE REMOVED (i.e., $ IN LEFT-MOST POSITION)
	N =	CANNOT BE REMOVED

SECTION F2 VE SCHEDULE (See Exhibit 15)

This section is used to enter data characterizing a schedule of events and/or actions associated with a variance, exemption, or other related data record. The SDWIS/FED data base has one schedule record for each such event or action that is related to a variance or exemption reported to EPA. The following is entered via this form:

VE ID (FY AND ID NUMBER)
(C3001)

Enter the VE ID for the variance, exemption, or other related data record to which the VE SCHEDULE will be applied. This data element is required since a VE SCHEDULE record must associated with a variance, exemption, or other related data record in the SDWIS/FED data base.

See CHAPTER IV, "Record Identification" for user assignment and automatic generation of this ID.

SCHEDULE ID
(C3101)

Enter a numeric value uniquely identifying a specific VE SCHEDULE related to the variance, exemption, or other related data identified in C3001.

See CHAPTER IV, "Record Identification" for user assignment and automatic generation of this ID.

ACTION
(C3103)

Enter the code value representing an event or action to be taken by the State (or was taken by the State) relating to a variance, exemption, or other related data record. When specified, ACTION must be a valid variance or exemption schedule action as described in the *SDWIS/FED On-Line Data Dictionary.*

SCHEDULED DATE (YEAR, MONTH, AND DAY)
(C3105)

Enter the calendar date on which a scheduled event or action relating to variance and exceptions record is or was scheduled to occur.

ACCOMPLISHED DATE (YEAR, MONTH, AND DAY)
(C3107)

Enter the calendar date on which a scheduled event or action relating to a variance and exceptions record was accomplished, if completed.

SECTION F2 - VE SCHEDULE
DATA ELEMENT REGISTRATION TABLE

DATA ELEMENT NUM.	FORM REFERENCE NAME	A/N/D	JUST	SIN	ZERO FILL	REG. CODE	GRANT	CBR
C3001	VE ID	A	L			3		N
C3101	SCHEDULE ID	N	L			3		N
C3103	ACTION	A	L	Y				Y
C3105	SCHEDULED DATE	N	L	Y				Y
C3107	ACCOMPLISHED DATE	N	L	Y				Y

LEGEND:

A/N/D	A =	ALPHANUMERIC, N=NUMERIC, D=DECIMAL
JUST	L =	LEFT JUSTIFY, R=RIGHT JUSTIFY, A=ALIGN
SIN	Y =	SKIP IF NONE OR NOT APPLICABLE
ZERO FILL	Y =	ENTER PRECEDING ZEROS OR ZERO FILL REMAINING DECIMAL PLACES
REG. CODE	1 =	OPERATIONALLY REQUIRED
	2 =	PROGRAMMATICALLY REQUIRED
	3 =	OPERATIONALLY REQUIRED, CONDITIONALLY
	4 =	PROGRAMMATICALLY REQUIRED, CONDITIONALLY

(SEE CHAPTER III, "DATA BASE REGISTRATION REQUIREMENTS," FOR FURTHER EXPLANATION)

GRANT	1 =	GRANT ELIGIBLE
	2 =	GRANT WITHHOLDING
	3 =	CONDITIONALLY GRANT ELIGIBLE
	4 =	CONDITIONALLY GRANT WITHHOLDING
CBR	Y =	CAN BE REMOVED (i.e., $ IN LEFT-MOST POSITION)
	N =	CANNOT BE REMOVED

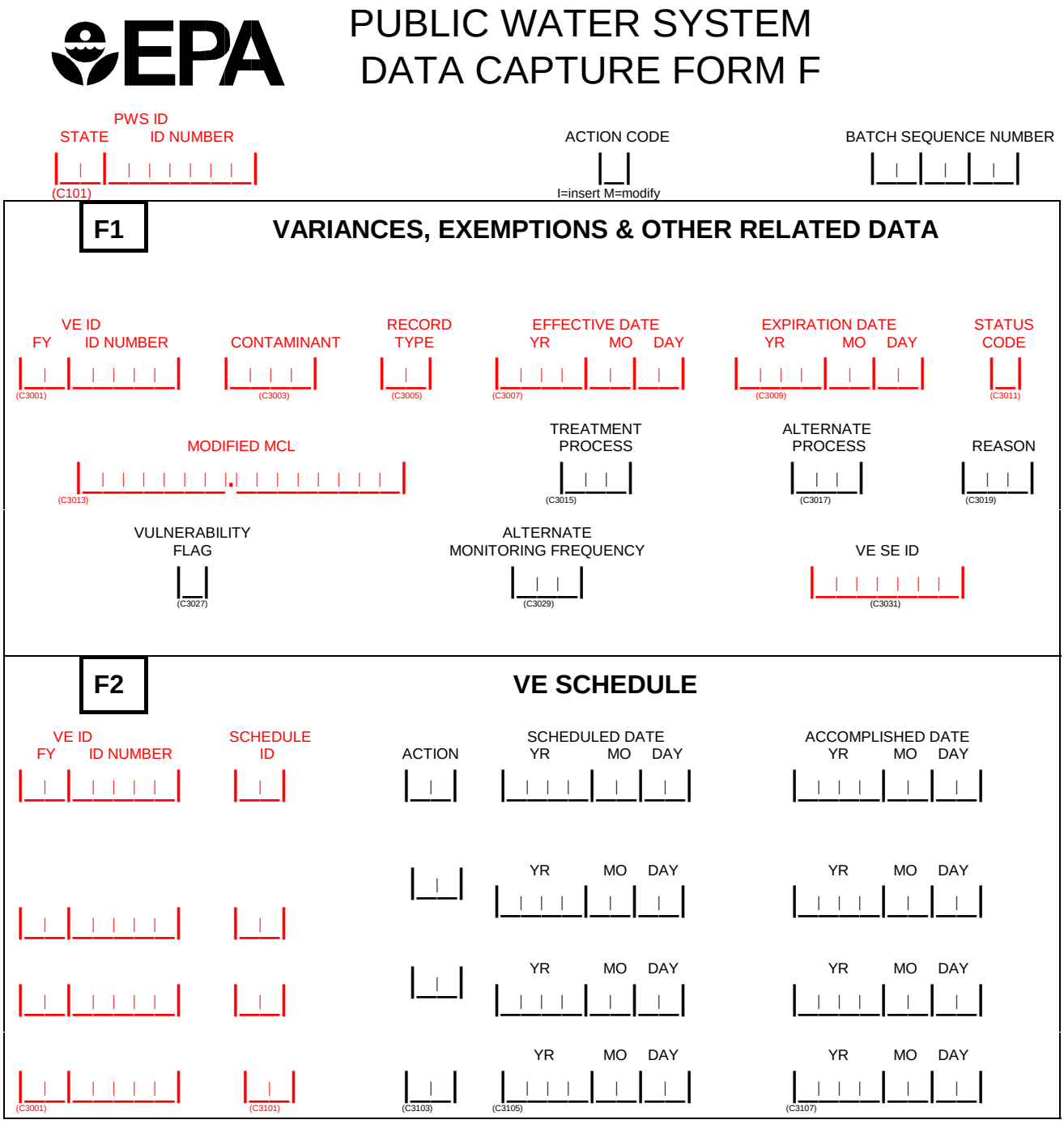

Exhibit 15. Data Capture Form F

Data Capture Form H1

SECTION H1 SAMPLE DATA (See Exhibit 16)

This section is used to enter data for Lead 90th Percentile (Pb90) and Copper 90th Percentile (Cu90) reporting and Unregulated Contaminant Monitoring (UCM) reporting. When the reporting requirements for a given data element differ, the rule for each will be stated. The following is entered via this section:

SAMPLE ID
(C2101)

Enter a Sample ID uniquely identifying a specific sampling occurrence related to a PWS.

See CHAPTER IV, "Record Identification" for user assignment and automatic generation of this ID.

When using the Unregulated Expansion Codes (see SAMPLE CONTAMINANT below) for UCM reporting, only GGCs will be accepted.

SAMPLE BEGIN DATE
(C2103)

For Pb90 and Cu90 Samples only, enter a valid date, greater than or equal to 1991/07/01. For Pb90 and Cu90 data, the SAMPLE BEGIN DATE must not be greater than the current date.

SAMPLE END DATE
(C2105)

For Pb90 and Cu90 reporting, enter a valid date, greater than or equal to 1991/12/31. The SAMPLE END DATE must be at least 6 months after the SAMPLE BEGIN DATE. The SAMPLE END DATE may be a future date.

For UCM reporting, SAMPLE END DATE is synonymous with SAMPLE COLLECTION DATE. Enter the date the sample is collected. For UCM reporting, this value must be less than or equal to the current date. It can **not** be a future date. In some instances, PWSs may use previously collected data. If data has not already been submitted for another reason, PWSs may use monitoring data collected any time after January 1, 1983.

SAMPLE CONTAMINANT
(C2107)

Enter the code value representing the contaminant associated with the sample.

For UCM reporting, these are unregulated contaminants specified in the regulations. The drinking water samples are to be analyzed for the presence of these contaminants. Not every sample must be analyzed for every contaminant. The PWS must indicate the contaminants for which each sample must be analyzed.

There is a shorthand method of entering UCM data into SDWIS/FED for contaminants measured using the same analytical method where results are below the method detection limit (MDL). It is referred to as Unregulated Expansion Codes (UECs). The users can enter a single transaction for all analytes comprising the GROUPS 1, 3, and 4 (as specified in the UCM Guidance). This "wild card" approach is restricted to the Analytical Methods shown below.

Group	UEC	Used for Analytical Method
1	11++	525.1
	12++	531.1
2	None	
3	3+++	502.1, 502.2, 524.1, 524.2
4	4+++	502.2

When using UECs, SAMPLE RESULT SIGN must be "<" (less than) and SAMPLE ANALYSIS RESULT must equal "0" (zero).

SAMPLE RESULT SIGN
(C2109)

For unregulated contaminant reporting, enter the valid sign for less than (<) or equal to (=). This data element is used in conjunction with SAMPLE ANALYSIS RESULT. SAMPLE RESULT SIGN is not allowed with Pb90 and Cu90 samples.

SAMPLE ANALYSIS RESULT
(C2111)

Enter a valid decimal value. SAMPLE ANALYSIS RESULT must be entered using the following rules:

- The integer portion cannot exceed 6 positions.
- The decimal portion cannot exceed 9 positions.
- Must be numeric.
- A decimal point may or may not appear.
- A decimal point must be specified if a fractional amount is intended.
- Must not be negative.
- Must be $\geq$ 1.35 when Sample Contaminant (C2107) is Cu90.

For UCM reporting, when SAMPLE RESULT SIGN and SAMPLE ANALYSIS RESULT are reported together, the following rules apply:

When reporting results at or below the MDL, SAMPLE RESULT SIGN must be < (less than) and SAMPLE ANALYSIS RESULT must be a positive number or 0 (zero). When SAMPLE RESULT SIGN is = (equal to) SAMPLE ANALYSIS RESULT indicates the actual value detected, and therefore must not be zero. SAMPLE RESULT SIGN must be specified with SAMPLE ANALYSIS RESULT.

UNIT OF MEASURE
(C2112)

For UCM reporting, enter the one-character code representative of that unit of measurement used for reporting the analytic results. The system will convert the code to the following units of measurement:

CODE	CONVERTS TO	UNITS OF MEASUREMENT
1	ug/l	micrograms/liter (parts per billion)
2	mg/l	milligrams/liter (parts per million)

UNIT OF MEASURE is not allowed with Pb90 and Cu90 samples.

SAMPLE ANALYSIS METHOD
(C2113)

Enter a valid analysis method which can be found in the *UCM Regulations.* This data element is optional, but if used, the following rules apply:

For UCM reporting, EPA has established between one and five analytic methods for each unregulated contaminant. When reporting UECs, the Sample Analysis Method must be an acceptable method for the Sample Contaminant being reported.

It is important to note that some analysis methods contain a decimal, (i.e., 531.1). This decimal must be submitted. However, for those methods not containing a decimal, (i.e., 505), the user is **not** to use the decimal point or the position to the right of it. Therefore, only 505 is correct, not 505.0. SAMPLE ANALYSIS METHOD is not allowed with Pb90 and Cu90 samples.

SOURCE TYPE
(C2115)

This data element is optional for UCM reporting, but if used, enter a valid code (1, 2, or 3) which indicates whether the source of the sample is:

- 1 = Surface water or purchased surface water.
- 2 = Ground water under the direct influence of surface water or purchased ground water under the direct influence of surface water.
- 3 = Ground water or purchased ground water.

These values can be found in the *SDWIS/FED On-Line Data Dictionary*. SOURCE TYPE is not allowed with Pb90 and Cu90 samples.

SE ID
(C2119)

This data element is optional, but if used, enter a valid Sample Source/Entity ID number that the PWS has established for the sampling point. SE ID is not allowed with Pb90 and Cu90 samples.

QTY COMPOSITED
(C2125)

This data element is optional. For UCM reporting, enter a valid number showing the total number of individual samples in the composite. If reported, the only acceptable values are numerals "2," "3," "4," and "5." QTY COMPOSITED is not allowed with Pb90 and Cu90 samples.

SAMPLE TYPE
(C2137)

This data element is optional for UCM reporting, but if used, enter the alphanumeric value ("R" or "F") representing the type of sample collected. This value identifies either a (R)aw Water or (F)inished Water sample. SAMPLE TYPE is not allowed with Pb90 and Cu90 samples.

SAMPLING RECONCILIATION ID
(C2139)

This data element is optional for UCM reporting. It is provided for Primacy Agencies to store information that uniquely identifies a sample.

DA EPA DATA

SECTION H1 - SAMPLE DATA
TA ELEMENT REGISTRATION TABLE

ELEMENT NUM.	FORM REFERENCE NAME	A/N/D	JUST	SIN	ZERO FILL	REG. CODE	GRANT	CBR
C2101	SAMPLE ID	N	L			3		N
C2103	SAMPLE BEGIN DATE	N	L	Y		4		N
C2105	SAMPLE END DATE	N	L			2		N
C2107	SAMPLE CONTAMINANT	A	N/A			2		N
C2109	SAMPLE RESULT SIGN	A	N/A	Y		4		N
C2111	SAMPLE ANALYSIS RESULT	D	A			2		N
C2112	UNIT OF MEASURE	N	L	Y		4		N
C2113	SAMPLE ANALYSIS METHOD	N	L	Y				Y
C2115	SOURCE TYPE	A	N/A	Y				Y
C2119	SE ID	N	L	Y				
C2125	QTY COMPOSITED	N	N/A	Y				Y
C2137	SAMPLE TYPE	A	N/A	Y				Y
C2139	SAMPLING RECONCILIATION ID	A	L	Y				Y

LEGEND:

A/N/D	A =	ALPHANUMERIC, N=NUMERIC, D=DECIMAL
JUST	L =	LEFT JUSTIFY, R=RIGHT JUSTIFY, A=ALIGN
SIN	Y =	SKIP IF NONE OR NOT APPLICABLE
ZERO FILL	Y =	ENTER PRECEDING ZEROS OR ZERO FILL REMAINING DECIMAL PLACES
REG. CODE	1 =	OPERATIONALLY REQUIRED
	2 =	PROGRAMMATICALLY REQUIRED
	3 =	OPERATIONALLY REQUIRED, CONDITIONALLY
	4 =	PROGRAMMATICALLY REQUIRED CONDITIONALLY

(SEE CHAPTER III, "DATA BASE REGISTRATION REQUIREMENTS," FOR FURTHER EXPLANATION)

GRANT	1 =	GRANT ELIGIBLE
	2 =	GRANT WITHHOLDING
	3 =	CONDITIONALLY GRANT ELIGIBLE
	4 =	CONDITIONALLY GRANT WITHHOLDING
CBR	Y =	CAN BE REMOVED (i.e., $ IN LEFT-MOST POSITION)
	N =	CANNOT BE REMOVED

DATA CAPTURE FORM H

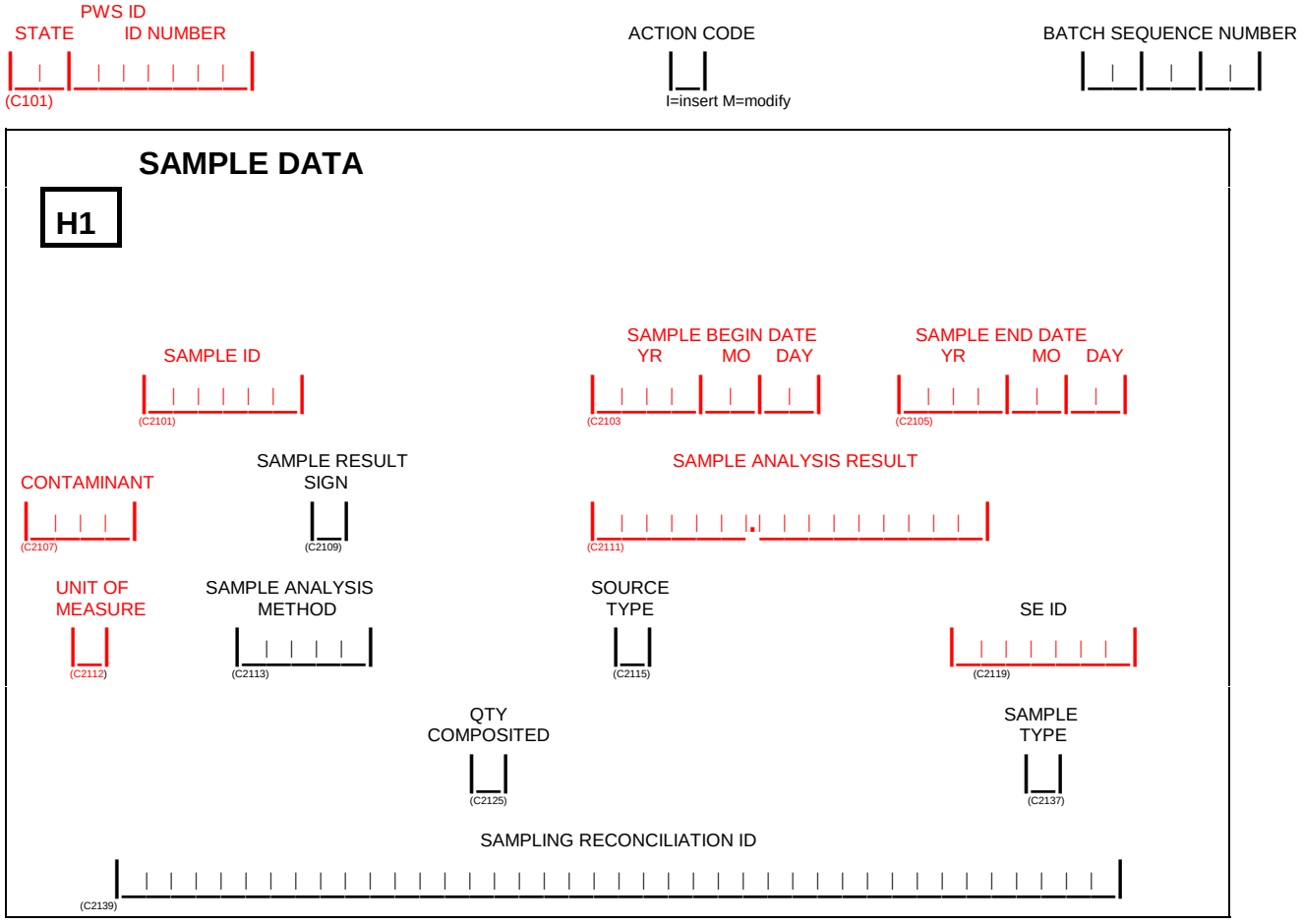

Exhibit 16. Data Capture Form H1

RECORD DELETION FORM (See Exhibit 17)

The RECORD DELETION FORM is available for the purpose of deleting an ENTIRE data base record (DBR) from the SDWIS/FED data base.

Note: The form section names listed on the right side of the form identify all DBR types that can be deleted.

Although PWS DBRs can be deactivated, they cannot be deleted.

The DBR deletion process cannot violate the rules of SDWIS/FED record registration (e.g., each PWS DBR must have at least one source DBR).

Along with each section type is the necessary identification data that must be specified in order to delete the appropriate DBR.

In all cases, the PWS ID must be specified. Additionally, at least one other record ID must be specified to uniquely identify the DBR to be deleted. For example, to delete a treatment DBR, the Source Entity ID (SE ID) must be specified along with the Treatment ID. This is because each treatment DBR is related to a particular Source Entity DBR. The same methodology is used for VE Schedule record deletion since the Schedule Record is related to a particular VE DBR (variances, exemptions, and other related data).

RECORD DELETION FORM

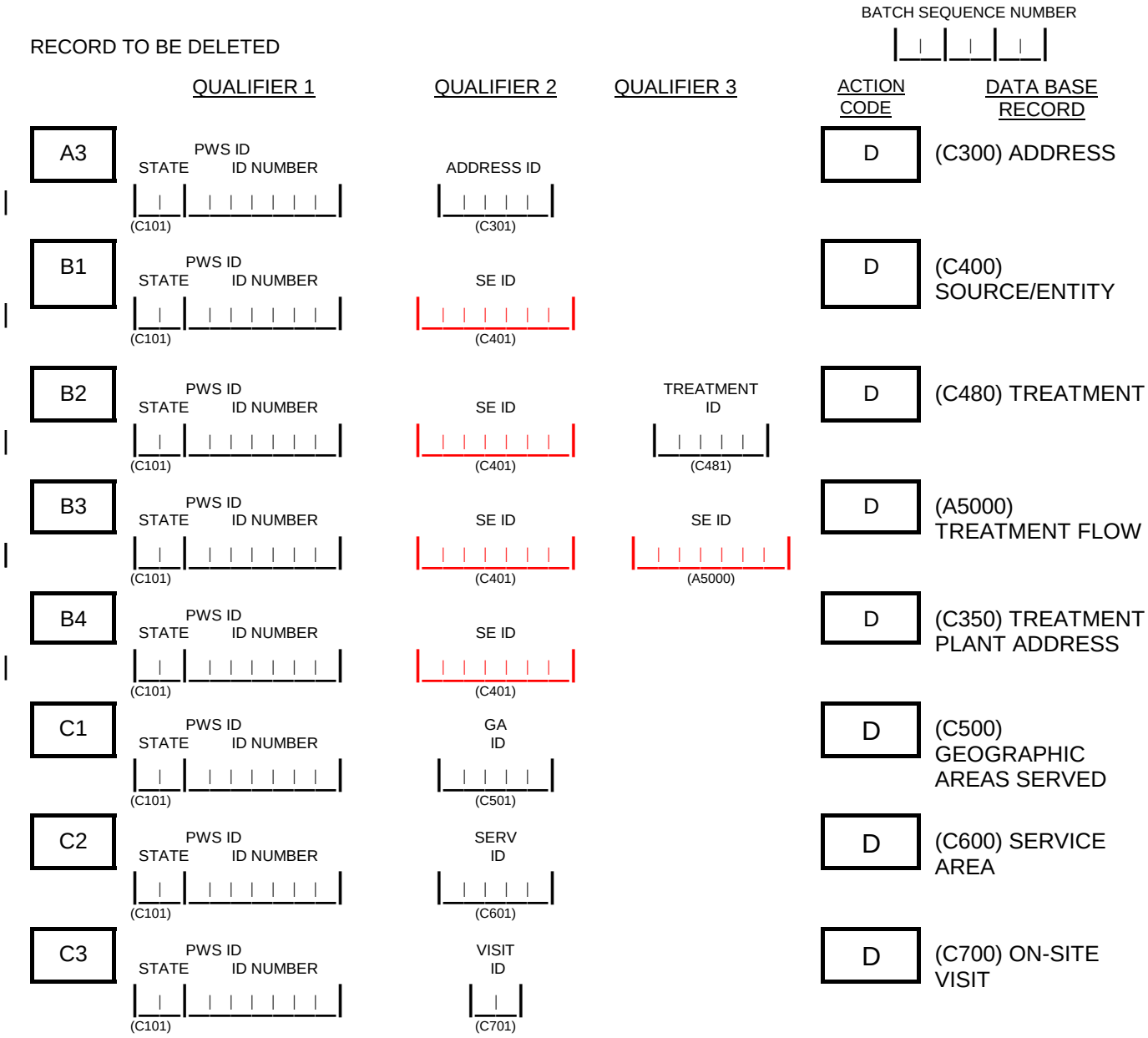

Exhibit 17. Record Deletion Form

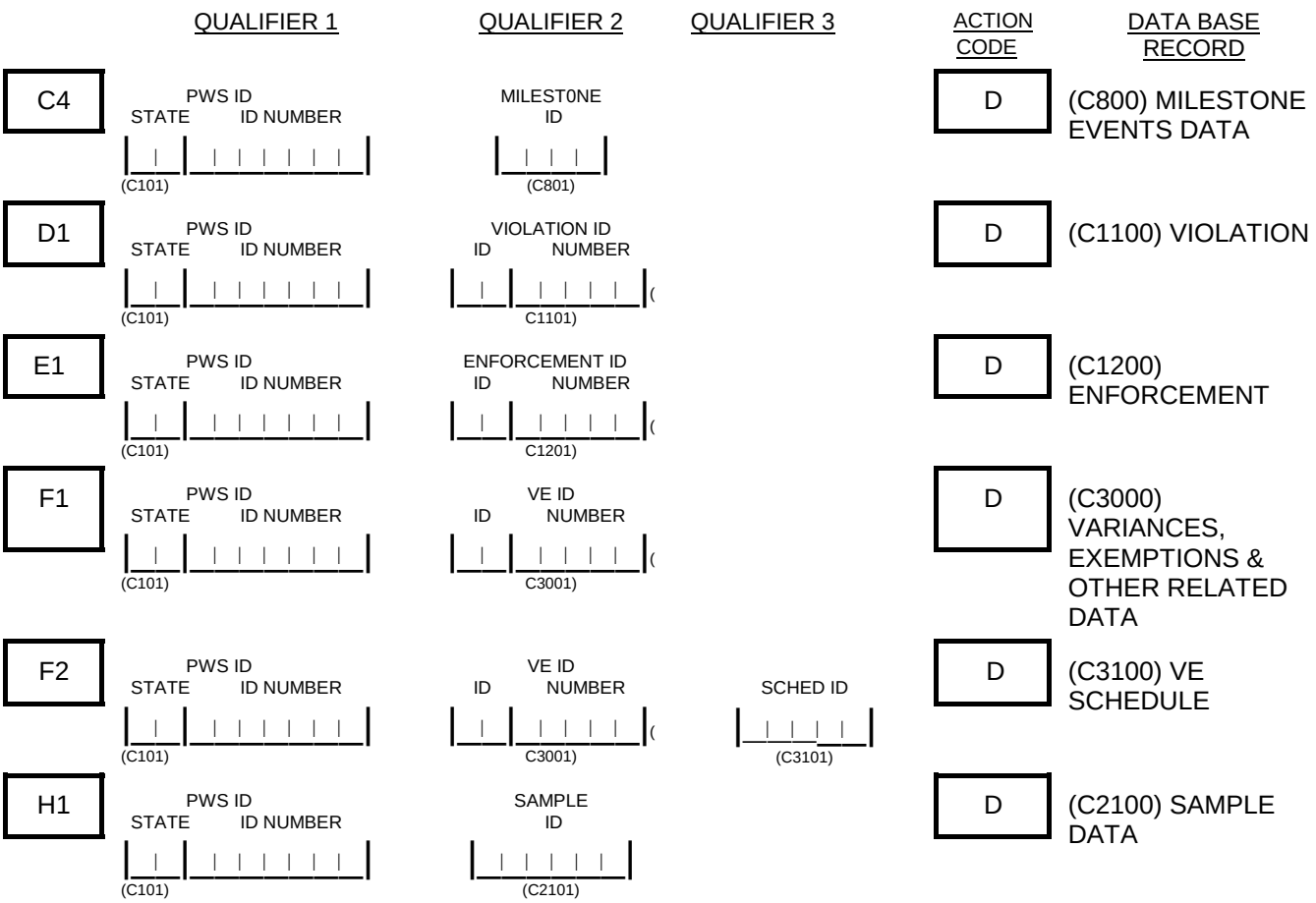

Exhibit 17. Record Deletion Form (Continued)

APPENDIX B

Lat/Long Conversion Formulae

Lat/Long Conversion Formulae

Latitude Conversion Logic for converting from Degrees, Minutes, and Seconds to Decimal Degrees:

Formula: Decimal Degrees = Degrees + (Minutes / 60) + (Seconds / 3600)
Where: LAT_DEGREES_NUM = 42
LAT_MINUTES_NUM = 15
LAT_SECONDS_NUM = 50.0000
Step 1. Decimal Degrees = 42 + (15 / 60) + (50 / 3600)
Step 2. Decimal Degrees = 42 + 0.25 + 0.01388888
Step 3. Decimal Degrees = 42.26388888, or 42.263889 rounded to 6 decimal places
If the State code is 'AS' (American Samoa)
LAT_DEC_DEG_MSR= -42.263889
Else
LAT_DEC_DEG_MSR= +42.263889

Latitude Conversion Logic for converting Decimal Degrees to Degrees, Minutes, and Seconds:

For purposes of illustration, 37.427917 Decimal Degrees will be used in the subsequent conversion steps.

Step 1. Degrees = Whole number portion of the Decimal Degrees number.
Degrees = 37

Step 2. Remove the whole number portion from the Decimal Degrees number.
37.427917 – 37 = 0.427917

Step 3. Multiply the result from Step 2 by 60.
0.427917 x 60 = 25.67502

Step 4. Minutes = Whole number portion of the result from Step 3.
Minutes = 25

Step 5. Remove the whole number portion from the result from Step 3.
25.67502 – 25 = 0.67502

Step 6. Multiply the result from Step 5 by 60.
0.67502 x 60 = 40.5012

Step 7. Seconds = Whole number portion and four decimal places from the result from Step 6.
Seconds = 40.5012

Step 8. Combine the results from Steps 1, 4, and 7.
37° 25' 40.5012"

Longitude Conversion Logic for converting from Degrees, Minutes, and Seconds to Decimal Degrees:

Formula: Decimal Degrees = Degrees + (Minutes / 60) + (Seconds / 3600)
Where: LONG_DEGREES_NUM = 88
LONG_MINUTES_NUM = 50
LONG_SECONDS_NUM = 39.0000
Step 1. Decimal Degrees = 88 + (50 / 60) + (39 / 3600)
Step 2. Decimal Degrees = 88 + 0.8333333 + 0.0108333
Step 3. Decimal Degrees = 88.8441666, or 88.844167 rounded to 6 decimal places
If the State Code is GU or PW or FM or MP or MH
LONG_DEC_DEG_MSR= +88.844167
Else
LONG_DEC_DEG_MSR= -88.844167

Longitude Conversion Logic for converting Decimal Degrees to Degrees, Minutes, and Seconds:

For purposes of illustration, 137.427917 Decimal Degrees will be used in the subsequent conversion steps.

Step 1. Degrees = Whole number portion of the Decimal Degrees number.
Degrees = 137

Step 2. Remove the whole number portion from the Decimal Degrees number.
137.427917 – 137 = 0.427917

Step 3. Multiply the result from Step 2 by 60.
0.427917 x 60 = 25.67502

Step 4. Minutes = Whole number portion of the result from Step 3.
Minutes = 25

Step 5. Remove the whole number portion from the result from Step 3.
25.67502 – 25 = 0.67502

Step 6. Multiply the result from Step 5 by 60.
0.67502 x 60 = 40.5012

Step 7. Seconds = Whole number portion and four decimal places from the result from Step 6.
Seconds = 40.5012

Step 8. Combine the results from Steps 1, 4, and 7.
137° 25' 40.5012"

APPENDIX D

Region Codes and USPS State Codes

Region Codes and USPS State Codes	
AL	ALABAMA
AZ	ARIZONA
AR	ARKANSAS
CA	CALIFORNIA
CO	COLORADO
CT	CONNECTICUT
DE	DELAWARE
DC	DISTRICT OF COLUMBIA
FL	FLORIDA
GA	GEORGIA
ID	IDAHO
IL	ILLINOIS
IN	INDIANA
IA	IOWA
KS	KANSAS
KY	KENTUCKY
LA	LOUISIANA
ME	MAINE
MD	MARYLAND
MA	MASSACHUSETTS
MI	MICHIGAN
MN	MINNESOTA
MS	MISSISSIPPI
MO	MISSOURI

Region Codes and USPS State Codes	
MT	MONTANA
NE	NEBRASKA
NV	NEVADA
NH	NEW HAMPSHIRE
NJ	NEW JERSEY
NM	NEW MEXICO
NY	NEW YORK
NC	NORTH CAROLINA
ND	NORTH DAKOTA
OH	OHIO
OK	OKLAHOMA
OR	OREGON
PA	PENNSYLVANIA
RI	RHODE ISLAND
SC	SOUTH CAROLINA
SD	SOUTH DAKOTA
TN	TENNESSEE
TX	TEXAS
UT	UTAH
VT	VERMONT
VA	VIRGINIA
WA	WASHINGTON
WV	WEST VIRGINIA
WI	WISCONSIN

Region Codes and USPS State Codes	
WY	WYOMING
01	EPA REGION 01
03	EPA REGION 03
04	EPA REGION 04
05	EPA REGION 05
06	EPA REGION 06
08	EPA REGION 08
07	EPA REGION 07
08	EPA REGION 08
09	EPA REGION 09
10	EPA REGION 10

Canadian Province Name	Code
Alberta	AL
British Columbia	BC
Manitoba	MB
New Brunswick	NB
Newfoundland	NF
Northwest Territories	NT
Nova Scotia	NS
Ontario	ON
Prince Edward Island	PE
Quebec	PQ
Saskatchewan	SK
Yukon Territory	YT

Code	Country Name
AA	Aruba
AC	Antigua and Barbuda
AF	Afghanistan
AG	Algeria
AJ	Azerbaijan
AL	Albania
AM	Armenia
AN	Andorra
AO	Angola
AR	Argentina
AS	Australia
AT	Ashmore and Cartier Islands
AU	Austria
AV	Anguilla
AY	Antarctica
BA	Bahrain
BB	Barbados
BC	Botswana
BD	Bermuda
BE	Belgium
BF	The Bahamas
BG	Bangladesh
BH	Belize
BK	Bosnia and Herzegovina

Code	Country Name
BL	Bolivia
BM	Burma
BN	Benin
BO	Belarus
BP	Solomon Islands
BR	Brazil
BS	Bassas da India
BT	Bhutan
BU	Bulgaria
BV	Bouvet Island
BX	Brunei
BY	Burundi
CA	Canada
CB	Cambodia
CD	Chad
CE	Sri Lanka
CF	Congo
CG	Zaire
CH	China
CI	Chile
CJ	Cayman Islands
CK	Cocos (Keeling) Islands
CM	Cameroon
CN	Comoros

Code	Country Name
CO	Colombia
CR	Coral Sea Islands
CS	Costa Rica
CT	Central African Republic
CU	Cuba
CV	Cape Verde
CW	Cook Islands
CY	Cyprus
DA	Denmark
DJ	Djibouti
DO	Dominica
DR	Dominican Republic
EC	Ecuador
EG	Egypt
EI	Ireland
EK	Equatorial Guinea
EN	Estonia
ER	Eritrea
ES	El Salvador
ET	Ethiopia
EU	Europa Island
EZ	Czech Republic
FG	French Guiana
FI	Finland

Code	Country Name
FJ	Fiji
FK	Falkland Islands (Islas Malvinas)
FO	Faroe Islands
FP	French Polynesia
FR	France
FS	French Southern and Antarctic Lands
GA	The Gambia
GB	Gabon
GG	Georgia
GH	Ghana
GI	Gibraltar
GJ	Grenada
GK	Guernsey
GL	Greenland
GM	Germany
GO	Glorioso Islands
GP	Guadeloupe
GR	Greece
GT	Guatemala
GV	Guinea
GY	Guyana
GZ	Gaza Strip
HA	Haiti
HK	Hong Kong

Code	Country Name
HM	Heard Island and Mcdonald Islands
HO	Honduras
HR	Croatia
HU	Hungary
IC	Iceland
ID	Indonesia
IM	Isle of Man
IN	India
IO	British Indian Ocean Territory
IP	Clipperton Island
IR	Iran
IS	Israel
IT	Italy
IV	Cote D'Ivoire
IZ	Iraq
JA	Japan
JE	Jersey
JM	Jamaica
JN	Jan Mayen
JO	Jordan
JU	Juan de Nova Island
KE	Kenya
KG	Kyrgyzstan
KN	Korea, Democratic People's Republic of

Code	Country Name
KQ	Kingman Reef
KR	Kiribati
KS	Korea, Republic of
KT	Christmas Island
KU	Kuwait
KZ	Kazakhstan
LA	Laos
LE	Lebanon
LG	Latvia
LH	Lithuania
LI	Liberia
LO	Slovakia
LS	Liechtenstein
LT	Lesotho
LU	Luxembourg
LY	Libya
MA	Madagascar
MB	Martinique
MC	Macau
MD	Moldova
MF	Mayotte
MG	Mongolia
MH	Montserrat
MI	Malawi

Code	Country Name
MK	Macedonia
ML	Mali
MN	Monaco
MO	Morocco
MP	Mauritius
MR	Mauritania
MT	Malta
MU	Oman
MV	Maldives
MW	Montenegro
MX	Mexico
MY	Malaysia
MZ	Mozambique
NC	New Caledonia
NE	Niue
NF	Norfolk Island
NG	Niger
NH	Vanuatu
NI	Nigeria
NL	Netherlands
NO	Norway
NP	Nepal
NR	Nauru
NS	Suriname

Code	Country Name
NT	Netherlands Antilles
NU	Nicaragua
NZ	New Zealand
PA	Paraguay
PC	Pitcairn Islands
PE	Peru
PF	Paracel Islands
PG	Spratly Islands
PK	Pakistan
PL	Poland
PM	Panama
PO	Portugal
PP	Papua New Guinea
PU	Guinea-Bissau
QA	Qatar
RE	Reunion
RO	Romania
RP	Philippines
RS	Russia
RW	Rwanda
SA	Saudi Arabia
SB	St. Pierre and Miquelon
SC	St. Kitts and Nevis
SE	Seychelles

Code	Country Name
SF	South Africa
SG	Senegal
SH	St. Helena
SI	Slovenia
SL	Sierra Leone
SM	San Marino
SN	Singapore
SO	Somalia
SP	Spain
SR	Serbia
ST	St. Lucia
SU	Sudan
SV	Svalbard
SW	Sweden
SX	South Georgia and South Sandwich Islands
SY	Syria
SZ	Switzerland
TC	United Arab Emirates
TD	Trinidad and Tobago
TE	Tromelin Island
TH	Thailand
TI	Tajikistan
TK	Turks and Caicos Islands
TL	Tokelau

Code	Country Name
TN	Tonga
TO	Togo
TP	Sao Tome and Principe
TS	Tunisia
TU	Turkey
TV	Tuvalu
TW	Taiwan
TX	Turkmenistan
TZ	Tanzania
UG	Uganda
UK	United Kingdom
UP	Ukraine
US	United States
UV	Burkina
UY	Uruguay
UZ	Uzbekistan
VC	St. Vincent and the Grenadines
VE	Venezuela
VI	British Virgin Islands
VM	Vietnam
VT	Vatican City
WA	Namibia
WE	West Bank
WF	Wallis and Futuna

Code	Country Name
WI	Western Sahara
WS	Western Samoa
WZ	Swaziland
YM	Yemen
ZA	Zambia
ZI	Zimbabwe

APPENDIX E

SDWIS/FED Update Frequency Policy

SDWIS/FED Update Frequency Policy

! It is the intent of EPA that each state should, on a routine basis, provide quarterly update files to SDWIS/FED production control for posting to the data base. These files may be followed up by a reasonable number of error corrections files. EPA's policy is that update errors will be corrected by the submitting party within 90 days of the end of the reporting quarter.

! In the case of total replace states, ideally, each type of file (Inventory or Actions) should only be submitted once per quarter. Error correction should be made via a traditional update file or files. EPA recognizes, however, that some states are not in a position to easily submit traditional update error correction files and may wish to wait until a subsequent total replace file is submitted, correcting any problems surfacing from the first submission. This may result in the submission of multiple total replace of actions files for different fiscal years.

! EPA is severely financially restrained in the area of computer resources. All states' updates are run under, and charged to, an EPA headquarters account. Total replace updates are particularly expensive to run, costing 10 to 20 times the amount that is charged for similarly sized traditional update file.

! Therefore, the following frequency rules are proposed for updating SDWIS/FED:

- Each state (or region) may run one inventory and one actions total replace file in each calendar quarter. The Actions file is to be only for the current fiscal year.

- Once per calendar year, each state or region may run actions files for prior fiscal years. The intent of these additional actions files is to correct inaccuracies found in prior fiscal years. States and regions should take care that all actions are reported initially in the correct fiscal year. States and regions should not routinely submit additional actions files because there "may" be some changes since it was last run. These files are only to be submitted when corrections have been made. To establish the quarter in which the annual replacement will be submitted, notify Production Control via email with a courtesy copy (cc.) to Frances Haertel (Haertel.Frances@epa.gov) and Abraham Siegel (Siegel.Abraham@epa.gov). Once the schedule has been established, the annual file submission may be submitted without the need to provide justification or prior approval.

- Should states or regions have the need to submit files on a more frequent basis, the SDWIS/FED data base manager may, on a case by case basis, grant individual one-time waivers from this policy. To request an individual one-time waiver, submit the request via email to Production Control with a cc. to Fran Haertel and Abraham Siegel. Include a justification explaining the need for a waiver.

- Given the relative costs of traditional updates, no explicit limit is yet proposed for traditional updates of SDWIS/FED. However, on a case by case basis, production control staff will alert the SDWIS/FED data base manager when a state or region is running an excessive number of traditional updates. EPA staff at headquarters and in the regions will work with those submitting the files to resolve any data problems which may be causing this excessive processing.

! Initially, tracking and enforcement of this file submission frequency policy will continue to be a manual process of production control. Eventually, software will be developed to automate these activities.

| ! This policy is effective as of July 15, 2001.